VOL. I. No. 12.

LIBRARY COPY
No 28219

THE JOURNAL OF EDUCATION.

NEW YORK.

DEVOTED TO EDUCATIONAL INTERESTS, SCIENCE, LITERATURE AND ART.

CONTENTS FOR FEBRUARY, 1876:

MR. E. J. WHITLOCK, PRESIDENT OF THE BOARD OF EDUCATION OF BROOKLYN—With Portrait. 833
MADAME DE MAINTENON AND THE SCHOOL OF ST. CYR—Part II. 837
TWO SONNETS—*A. E. J.* 842
PRINCIPLES AND METHODS OF PRIMARY EDUCATION—OBJECT-TEACHING: COLORS—*Prof. N. A. Calkins.* 843
THE SCIENCE OF READING—*A. G. Merwin.* 849
THE PHILOSOPHY AND METHODS OF PRIMARY INSTRUCTION—Seventh Article—*James Cruikshank, LL.D.* 852
SPELLING. 854
EDITORIALS—The "Nation's" Criticism on Industrial Art Education. 858
EDITORIALS—
Teachers' Salaries. 865
Higher Education. 866
The "Course of Study" in Public Schools. 866
Compulsory Education, etc. 867
SCIENTIFIC MISCELLANY. 868
ART MISCELLANY. 876
EDUCATIONAL AND GENERAL MISCELLANY. 883
THE SCHOOL-ROOM. 888
KINDERGARTEN AND NURSERY DEPARTMENT. 895
SCHOOL BOARD AND SOCIETY TRANSACTIONS. 901
VARIETY. 907
BOOK NOTES AND NOTICES. 909

Office of the Journal of Education, No. 751 Broadway, New York.

SINGLE COPIES, 25 CENTS. YEARLY SUBSCRIPTION, $2 50

Entered according to Act of Congress in the Year 1876, by GARRET BERGEN, in the Office of the Librarian of Congress at Washington.

POPULAR NEW BOOKS.

GUYOT'S SERIES OF GEOGRAPHIES.

FOR COMMON SCHOOLS."

GUYOT'S NEW ELEMENTARY GEOGRAPHY. Price 75 cts.

With a complete set of fifteen new, distinct, and beautiful maps.

GUYOT'S NEW INTERMEDIATE GEOGRAPHY. Price $1.50.

This *new book* contains twenty finely-engraved copper-plate maps, which, for accuracy and distinctness of expression, are not excelled.

Its text is symmetrically arranged, containing every valuable feature of the old book, reconstructed so as to include also a skilful treatment of *Industrial* and *Commercial* Geography.

Was issued in June last, and has been received with signal favor throughout the country.

Adopted for use in the Cities of New York; Brooklyn, N. Y.; Newark, N. J.; Richmond, Va.; Davenport, Iowa; Lynchburg, Va.; Worcester, Mass.; Portland, Me.; Jersey City, N. J.; Toledo, O.; Salem, Mass., &c., &c.

FOR SENIOR GRADES (HIGH SCHOOLS AND ACADEMIES).

GUYOT'S GRAMMAR SCHOOL GEOGRAPHY. Price $2.00.

GUYOT'S PHYSICAL GEOGRAPHY. Price $2.25.

SHELDON'S READERS.

By PROF. E. A. SHELDON,

PRINCIPAL STATE NORMAL SCHOOL, OSWEGO, N. Y.

Superbly Illustrated with over 300 Engravings from Original Designs.

GRADED SERIES.

	Retail.	Introduction.	Exchange.
SHELDON'S NEW FIRST READER. 80 Pages	25c.	17c.	13c.
SHELDON'S NEW SECOND READER. 192 Pages	50c.	34c.	25c.
SHELDON'S NEW THIRD READER. 224 Pages	75c.	50c.	38c.
SHELDON'S NEW FOURTH READER. 336 Pages	$1 25	84c.	63c.
SHELDON'S NEW FIFTH READER. 450 Pages	1 50	$1 00	75c.

Sheldon's New Manual of Reading. Price $1.00.

PHONIC READING.

	Retail.	Introduction.
SHELDON'S NEW PHONIC PRIMER. 60 Pages	20c.	15c.
SHELDON'S NEW PHONIC CHARTS. 10 Nos. Boards	$5 00	$3 50

Endorsed by Principals of State Normal Schools, at Fredonia, N. Y.; Cortland, N. Y.; Potsdam, N. Y.; Brockport, N. Y.; Geneseo, N. Y.; Buffalo, N. Y.; Millersville, Pa.; and Plymouth, N. H.

Also in use in, whole or part, the Cities of New York, Brooklyn, Oswego, N. Y.; Cleveland, O.; Williamsport, Pa.; Utica, N. Y.; Bath, Me.; Yonkers, N. Y.; Quincy, Mass.; Galena, Ill.; Knoxville, Tenn.; Springfield, Ohio; Elizabeth, N. J.; Albion, Mich. Manchester, Iowa, &c., &c.

Special price-lists and descriptive circulars sent on application.

SCRIBNER, ARMSTRONG & CO.,

743 and 745 Broadway, New York.

C. P. Whittier

AMERICAN PHOTO-LITHOGRAPHIC Co. N.Y.

THE JOURNAL OF EDUCATION.

NEW YORK, FEBRUARY, 1876.

MR. E. J. WHITLOCK,

PRESIDENT OF THE BOARD OF EDUCATION OF BROOKLYN, N. Y.

(With Portrait.)

A long and honorable career in the public service in connection with the Brooklyn Board of Education, and for the last nine years its President, has given Mr. E. J. Whitlock well-deserved prominence, and his name and character are held in high esteem by thousands of citizens and children of the public schools in the City of Churches. Under his intelligent and faithful administration, there has been a sustained, growing and vigorous interest in the schools, and his labors and those of his associates have met with a general appreciation and approval on the part of the community. The impartial discharge of the duties of such an important public trust, and with such manifest favor for so long a period, at once stamp Mr. Whitlock as a man pre-eminently fitted for the position he has filled with so much judgment, grace and dignity.

The simple and conservative principles of honesty and rectitude upon which the Brooklyn Board was organized, have remained intact to this day; and wisely adhering to its traditional policy of slow but substantial growth, it avoids many mistakes common to the hasty adoption of crude and imperfectly-developed schemes, and the glittering experiments to which, oftentimes, brilliant but impractical theorists seek to commit it. The Board is, nevertheless, entitled to and receives due credit for the intelligent and discriminating appreciation of every element of progress in methods and appliances, at all calculated to add to the efficiency of its administration.

Fortunately, also, for the Board, it has been held entirely aloof from politics, and is not subject to the exigencies and unreasonable demands of partisan strife and the changes arising from rotation in political administration. Composed, as it is, of gentlemen representing the best social and intellectual elements of the city, irrespective of politics, it is left to discharge its trust in accordance with its best judgment and with a lively sense of the responsibility confided to it. Its sessions are often characterized by spirited debate, but there underlies all, the realizing sense of good-will and kindly sentiment, as each gentleman recognizes the fact, that however much his associates may differ from him, they have all a common purpose to do what is best for the schools of the city. In regulating the varied discus-

sions of a large body of gentlemen, President Whitlock exhibits a tact and a quiet mastery and firmness that are possessed but by few presiding officers. His success is largely due, without doubt, to the respect entertained for him by his associates.

Ephraim J. Whitlock was born in New York City in the house of Robert Morris, his grandfather, an old Knickerbocker and a near descendant of the Robert Morris who signed the Declaration of Independence. The residence was situated at the corner of Howard and Rhinehurst (now Centre) streets, at that time one of the most respectable neighborhoods for private residences in New York. At the proper age, Master Whitlock was placed at Public School No. 1, then located in Tryon Row. In 1830, his family removed to Brooklyn, where he resumed his studies in Public School No. 1, in Concord street, remaining there until his thirteenth year. He then entered the old-established house of Bowne & Co., stationers, located at the corner of Wall and Water streets, and whose establishment was destroyed by the great fire of 1835—young Whitlock remaining with this firm altogether some fifteen years. Mr. Robert Bowne was one of the leading Quakers of the day, and, upon Mr. Whitlock's retirement, gave him the warmest expressions of his confidence and esteem. Mr. Whitlock left to become a member of the house of Wm. H. Arthur & Co., manufacturing stationers—a firm long and favorably known to the business men of New York.

After a period of close application to business, extending over 27 years, Mr. Whitlock was compelled, in 1860, to retire from it, on account of impaired health. After two years of relaxation and complete emancipation from the cares of business, he, without solicitation on his part, was appointed by the Canal Board of this State the Collector of the Canal Revenue in New York City. Its responsible duties were discharged for two years in a manner to call forth the unqualified and unanimous approval of the Canal Board. Retiring from the position at the close of the administration which had sought his services, he established the only bonded warehouse for the reception and storage of tobacco then in the port of New York. He remained in the discharge of the duties incident to this business until, in 1869, failing health again demanded that he should rest from active labor. He turned this enforced leisure to practical account by a visit to Europe, where he not only found improved health, but made himself familiar with many points and subjects of interest in history, literature, and art. Mr. Whitlock, with that early love for the public school begotten in the heart of the loyal pupil, had, in his growing manhood, never lost his interest in it, and was more or less identified with educational matters as early as 1858, at which date he first became a member of the Board. It was his pleasure, in the tour to Europe made in 1869, to inquire into and study with some interest the educational status of the countries visited, and the result of his observations was to feel an increased national pride in our own system. In 1873, he again resumed business as treasurer of the Pioneer Tobacco Com-

pany, whose works are in Brooklyn and whose business is one of the most extensive in that line in the country.

In this brief sketch of the business life of an honored citizen of Brooklyn, it seems entirely appropriate to give due credit to his ancestry for some of the sterling merits of the man. Reference has already been made to his kinship with Robert Morris, whose name has been for a hundred years immortalized as a signer of our Declaration of Independence. On the other hand, he was connected with General Whitlock, his granduncle, of Revolutionary fame, and one of Washington's most trusted and efficient lieutenants. The purity and loyalty of the blood has been preserved to us in the subject of this sketch, who, during the dark days of the Rebellion, took a prominent stand against the enemies of his country, and who, upon all questions of vital public interest, concentrates his thought and effort upon such plans and expedients as will give a broader and richer life to the nation.

In the early days of Brooklyn, as in New York and elsewhere, the Fire Department was composed entirely of volunteers, and many of our oldest and best citizens look back with pride to the incidents connected with that period of arduous duty, when the prevailing spirit was only one of friendly emulation to excel in faithfulness of obligation as a good citizen. In those relations, friendships were formed which are being severed, only too swiftly, by the great reaper—Death. Mr. Whitlock, as a member of the old Fire Department, has many delightful memories; he belonged to Hose Company No. 1, of which the late R. R. Story was foreman, and among the members were B. W. Davis, W. J. and Warren Beebe, and other well-known and respected residents of Brooklyn.

As may be inferred, Mr. Whitlock, as an agreeable and forcible speaker, has often proved an influential factor in the settlement of the local political affairs of the day, into which his concern as a citizen, and his representative position among his associates, would very naturally lead him; but while devoting his time and means to the development of a healthy interest in the details of municipal government on the part of the people, and throwing the weight of his influence to the selection and maintenance of the best men for offices of public trust, he has himself declined repeatedly all offers of public position seeking to confer deserved recognition of his public services, preferring to preserve unchallenged his identification with what he regards a high and honorable trust as member of the Board of Education, with which he has been so long and so usefully connected, and to which he has been re-appointed by each succeeding administration, without solicitation on his part, since his first appointment as the successor of Alderman Peter G. Taylor.

In these days of invention and rapid progress on every hand, attention is largely diverted from the quiet, silent workers who, with many an honest thought and suggestion, are laying out the work that shall make the future to bring more brightness and intelligence and ease to every household. Of such workers are those in our Boards of Education, and many

others whose reward is found not so much in the gratitude of the people whom they have labored for, but in grand results of their work to be indelibly graven upon the educational progress of the future.

It is a curious triple coincidence, if the phrase is admissible, that Mr. Whitlock, as a boy, should leave School No. 1 in New York to resume his studies at School No. 1 in Brooklyn, and that he should, as its chairman, so successfully administer its affairs years afterwards.

In 1860, he was made Chairman of the Teachers' Committee, then, as now, one of the most responsible committees in the Board of Education. While holding this position, he instituted a thorough investigation and inquiry as to the details of school management in every prominent city throughout the Union; and as a substantial and gratifying result of that investigation, caused the establishment of a graded course of study in the schools. The importance and value of this work can scarcely be overestimated. As a logical and rational result of it, an equitable scale of salaries for teachers was adopted through the recommendation of this committee. After the establishment of these salutary reforms in educational matters, Mr. Whitlock next directed his attention to the entirely anomalous system prevailing in the use of text-books, as well as to its injustice. In due time this question was referred to a committee, of which Mr. Whitlock was chairman, his associates being Hon. Cyrus P. Smith and Mr. J. S. Burr. The report of this committee, embodying the very practical suggestion of simplifiying, reducing in number and establishing a uniformity of books to be used, was submitted to the Board and unanimously adopted. The work of the committee resulted in an increased efficiency in the schools, and the saving of a large sum of money to the parents and to the city.

During his unremitting and faithful service as chairman of this committee, Mr. Whitlock was elected Vice-President of the Board in 1869, and in the following year was elected President, to which position he has since been each year unanimously elected by his associates in the Board as a mark of esteem and confidence, and as a recognition of his admirable fitness for the position of presiding officer. This action of the Board, as already intimated, in adhering to the wise policy of maintaining an experienced and efficient officer in position, has met with popular acceptance. He has had but two predecessors—Cyrus P. Smith, the first, holding the position for nearly twenty-one years from the organization of the Board in 1845, and Dr. J. Sullivan Thorne, who held the position for about three years.

Mr. Whitlock has been a conspicuous example among that class of public-spirited gentlemen whose tastes and sympathies both incline them towards the discharge of representative duties, embracing the most grave responsibilities—the education of the youth of the country—the principal reward for which must come from the consciousness of duty well performed. During his connection with the Board, he has made himself familiar with every detail of school work, and in such a manner as to become

personally known to every teacher and to a large number of pupils in the schools throughout the various wards of the city. His kindly words of cheer to the children are always fitting and precisely adapted to both their tastes and needs. Few better than he can stimulate the boy or girl to hearty endeavor without resort to illusory figures of speech. By simple incident, he presents to them the uses and powers of acquired knowledge, its absolute need to success in life, competing with the learned, and in taking long strides ahead of the unlearned, and, finally, the respect it commands, and the honor it confers upon manhood and womanhood when life has otherwise been just and upright, crowning old age with additional glory. In his personal presence, Mr. Whitlock is genial, cultivated and companionable. The manner of the man presents this suggestion insensibly to the mind, and his conversation at once confirms the impression. He is a gentleman of extensive, careful reading and thorough observation, and every year adds to the numerous graces and qualifications which have so long been recognized by his friends as eminently fitting him for the position which he now fills with such credit to himself and benefit to the citizens of Brooklyn.

MADAME DE MAINTENON AND THE SCHOOL OF ST. CYR.

PART II.

Just about this time, however, Madame de Maintenon learned with horror that these public performances were having a most dangerous and unwholesome influence upon the *morale* of the school. The irruption of the court, with all its odorous frivolities and all its hollow glitter, had brought great havoc. The girls had begun not only to look forward to the presence of the King's attendants, but, as well, to look *at* them. Most improper smiles and glances were detected, current between the lords in waiting and the girlish actresses. More dreadful still, two or three actual flirtations ensued, as the result of these well-intended exhibitions. "Athalie" was produced; but after its first representation, the doors of the little theatre were closed to the profane vulgar, and thenceforward the scholars had no other audience than the King and his personal attendants. The transformation was perfected in 1692, when, after two years of swift approximation to the condition of a religious house, the school became a convent of the order of St. Augustine. The pupils took the vows at the age of eighteen, and especially dedicated themselves to the education of the young orphans who were admitted to the school. Chants, motetts, and choruses took the place of the proscribed drama, and Lully wrote hymns for the same voices, for which Racine had composed his later tragedies. The King's regard was still constant, and his orchestra and military band were frequently employed in directing these youthful daughters of his *noblesse*.

Into even this sober-tinted Paradise, heresy was able to penetrate, and that placid creed of Quietison which made Fénelon an heresiarch, filtered into St. Cyr, through the amiable agency of Madame de Guyon. Many of the *dames* were entangled in its meshes; notably that great and earnest woman, Madame de Maisonfort. When Madame de Maintenon discovered how dangerously her wards were situated in this respect, great was the hubbub. Madame de Guyon was expelled, and her writings removed. Fénelon demanded a trial for her, and it was granted. The bishop of Chalons, Bossuet, and Tronson, Superior of St. Sulpice, met to judge her at Issy. The future Archbishop of Cambrai defended the accused, who, after eight months' deliberation, was pronounced guilty, and her works were condemned. Madame du Tour, Madame de Montaigle, and Madame de Maisonfort, still adhering to the fated creed, were separately banished, by *lettres de cachet*, to Grenoble, Chateau d'un, and Meaux.

Of course, these troubles brought dreadful scandal in the school, so that our eminently-Christian and well-beloved Louis was obliged to personally appear among the distracted scholars, and denounce, with all his august power, the heresy which was thus extirpated.

Indeed, so completely was the pestilential doctrine eradicted, that when Fénelon was appointed Archbishop of Cambrai, at the solicitation of Madame de Maintenon, he selected the school-chapel at St. Cyr as the scene of his consecration, which was performed in private on the 10th of June, 1695. There were present, besides the *dames* and scholars, and Madame de Maintenon, Bossuet, the officiating bishop, the bishops of Chalons and Amiens, the three grandsons of the King, the Duke de Beauvilliers, and a few friends of the candidate.

With the later years of Louis XIV, the school of St. Cyr was closely associated. When the King went to war, he always desired his "angels of St. Cyr" to pray for him and for his arms, which doubtless most of them would have done without the royal invocation, seeing that nearly all had fathers or brothers in the King's host. After his victories, Louis would write to Madame de Maintenon, and ask her *protegées* to thank Heaven for his success.

When Louis, in his earlier days, persecuted his Huguenot subjects, the league of Augsburg was formed. That league was dissolved by the betrothal of the Duke of Savoy's eldest daughter to the young Duke of Burgundy, just as in later years Princess Clotilde, daughter of the Duke of Savoy's successor, married Prince Napoleon. The young Savoyarde, only eleven years of age, was educated at St. Cyr under the name of Mlle. de Lastie. We have seen how she participated in the representation of "Esther." During her residence at the school, the King was a frequent visitor, and abandoned, in the quiet gardens of the institution, that arrogance and pomp which more than even his undoubted genius characterized Louis Quatorze.

These were the happiest days, the golden noon of St. Cyr. This is what

one of its historians says of that peaceful era.

"It was at this period, perhaps, that St. Cyr approached most nearly to the ideal of its patroness. Humility, gentleness and simplicity reigned in the hearts of the scholars. The love of the world was no longer their ruling passion. The fame of their piety extended throughout France. The Pope sent them indulgences, presents and letters. The holiest prelates desired to be consecrated in their church. Bossuet, Fénelon, Bourdaloue, and Massillon all preached in their pulpit. The superiors of all the convents in the country asked for the demoiselles of St. Cyr. But though many took the monastic vows, Madame de Maintenon still wished that more of them should marry. "What I lack," said she, "is sons-in-law." Some of them married men of distinction. But the dowry which they could draw from the public funds was not large enough to attract many suitors of that day."

But these halcyon days were not destined to last forever, nor were peace and prosperity so content with France that they cared to prolong their beneficent reign.

The war of the Spanish succession grievously disturbed the tranquil air of St. Cyr. Marlborough was in the field, and with Prince Eugene was terribly avenging the revocation of the Edict of Nantes. The blows that his stout grenadiers struck at Ramillies and at Blenheim echoed dismally in the scholastic halls. The girls had brothers and fathers under the royal lilies, and among those who fell before the English arms were more than one whose fate was mourned by the lovely wards of Madame de Maintenon. Richelieu was dead. Mazarin was dead. Louis himself aged fast in those troublous times, and France was sore stricken. The school was an epitome of the nation, so that the King himself at last had to visit the girlish mourners and comfort them in person. Famine followed war, and the pupils sold their jewelry to feed the poor, and with Madame de Maintenon, as frugal as the rest, lived on oatmeal. Then the good Bishop of Chartres, their kindly friend, died, and bequeathed them his heart. Two short years afterwards, in a single month, the Duke of Burgundy and his wife, she who had came from Savoy and been Mademoiselle de Lastie, died also, and then their child, the Duke of Brittany. The King would often revisit, after their deaths, the scenes of the Duchess' girlhood. In pathetic communion with the wife of his strange second wedlock, he would bow his weary head and weep at the reverses which were bringing his gray hairs in sorrow to the grave. From her oratory at St. Cyr, the old man went forth refreshed to repair the injuries his dominions had suffered.

It was not long, however, before the chapel of St. Cyr resounded with the prayers of his "angels" addressed to Heaven in behalf of their dying ruler and friend. On the 1st of September, 1715, Louis XIV expired, and Madame de Maintenon, her first grief over, betook herself finally to her residence among her *protegées*. There she devoted her last years to the completion of her self-imposed task, seclud-

ing herself from the royal family and adopting the manner of living almost of a *religieuse*. The royal council still continued her income, but she expended it in works of charity, dedicating her hours to prayer and the instruction of her girls. On the 10th of June, 1717, no less a dignitary than Peter the Great straggled into the suffering presence of this remarkable woman, who, in a letter bearing date of the next day, thus described the visit of the eccentric Russian potentate: "The Czar arrived at seven o'clock in the evening. He sat down by the head of my bed. He inquired if I were sick. I replied that I was. He asked what was the matter with me. I answered 'extreme old age.' He did not know what to say, and his interpreter appeared not to understand me. His visit was very short. He drew back the curtains at the foot of my bed to see me. You may be assured that he was soon satisfied.' He took with him a plan of the house. But he seemed not to have been deeply impressed by the institution itself. If it had only been the model of a ship, he would have been rather more interested.

After languishing over four years from the death of Louis, Madame de Maintenon departed this life on the 15th of August, 1719. The *dame* who became the school's historian thus sorrowfully alludes to her decease: "Then there was one common cry of grief in all the house, and one can imagine what was our sorrow to find ourselves thus separated forever from her who had, after God, secured us our fortune and our happiness in this life. We wept for her most bitterly, and everything which recalls to us her memory, still occasions us deep emotions." She was buried in the church, a black marble slab was placed over her grave, to which the novices would resort as to a shrine, and her rooms and furniture were left undisturbed as precious relics.

The young King assured the *dames* of his friendship when that patroness was dead, and the Infanta of Spain, his destined bride, was received as a pupil, just as the Duchess of Burgundy had been entertained. The King once visited her there with a retinue of two hundred persons. The Infanta, however, was politely rejected as a candidate for the hand of Louis XV, and Maria Leczynski, of Poland, took her place. She prayed the *dames* of St. Cyr to regard her as a second Madame de Maintenon, and the girls, at her urgent request, were once more allowed to play "Esther" before her. She entertained a strong regard for a rude statue of the Virgin, which was in the grounds of the institution. Perhaps it was due to a pathetic legend which attached to the figure. A young girl had been refused admission to the novitiate, and knelt one cold Winter night in supplication to the Holy Mother. Mary heard her, and took her to her bosom, since next morning they found the girl's frozen body kneeling in the snow at the feet of the statue.

It was from this date that the fortunes of the house slowly declined. Says one of its memoralists: "Cardinal Fleury looked upon it with no favor, and though the Queen wished her children to be educated there, they were sent to the Abbey of Manbuisson, where they were shamefully

neglected. Sickness, too, was making fearful inroads upon the little flock. The prevailing dampness of the place induced dysentery and pulmonary complaints. Louis XV, therefore, at last consented to repair the decaying edifice, and to improve the drainage of the grounds. He also increased the revenues of the institution. But its day of glory had passed. The teachers had forgotten the precepts of their departed patroness. They made their education narrow and bigoted. They became avaricious. Their property swelled to such an amount that the jealousy of the public was excited."

It was during the reign of Louis XV, in 1769, that Horace Walpole visited St. Cyr and heard, with pleasure, the singing, by the pupils of choruses from "Athalie," and a nun who, "a little less skilful than St. Cecilia, played the violin."

Louis XVI continued the traditions of royal protection; but what did such protection avail against the tempest of the Revolution? With the falling of the crown, fell also the *prestige* of St. Cyr. After repeated confiscations of their property, the Legislative Assembly ordered the dissolution of the school and the immediate dispersion of the pupils, twenty sous a league being offered each *dame* and scholar for her traveling expenses. The second girl to leave the House was one Mademoiselle Marie Anne de Buonaparte, of Corsica, whose brother, a young captain of artillery, called for her from Paris, in a ramshackle old *voiture* which he had, for reasons of economy, much debated about hiring. This was on the 2d of September, 1792. In a few short years afterwards, Marie Anne de Buonaparte was Princess of Lucca and Piombino, and the young Captain of artillery used to visit St. Cyr to inspect, as Napoleon the Great, the military academy into which Madame de Maintenon's foundation had been transformed by his orders.

On the 1st of May, 1793, the last *dame* took her tearful leave of Madame de Maintenon's grave, and the House became a military hospital. The body of its founder was dragged from its resting place in the church and thrown with indignity into a hole in the cemetery. In 1800, the hospital gave place to a school called the *Prytavée Francaise*, and in 1802, its director, M. Crouzet, exhumed the corpse of Madame de Maintenon, and once more buried it, this time in the court. In 1805, St. Cyr, by Napoleon's orders, became a military school, the West Point of France, and General Dateil, who had charge of it, like a true Frenchman of the period, signalized his accession to authority by again digging up the body of Madame de Maintenon, which he packed into a pine box and hid away in a garret. There it decayed for thirty years. In 1837, Colonel Baraguay d'Villiers, who had succeeded the valiant Dateil, gave the poor bones, let us hope, their final sepulture. He found in the original grave the fragments of a coffin, some spices, the heel of her shoe, a small ebony cross, and some pieces of her winding-sheet. These, with the contents of the box which Dateil had placed in the garret, he inclosed in a mausoleum of black marble. The sarcophagus is simply inscribed:

Ci-Git.
MADAME DE MAINTENON.
1635 — 1719.
1836.

And to this day she sleeps there, heedless of the boyish shouts which have replaced the soft voices of her *protegées*, and troubled in no respect by the singular fortune which has substituted, for the gentle exercises of her day, the stern teachings of military professors and the martial clank of student battalions going through their drill. Gruff sergeants give the word of command in halls which once echoed the mild admonitions of godly women, and rollicking soldier-choruses startle the corridors that so long ago were ringing with the merry laughter of young girls.

(Conclusion.)

TWO SONNETS.

I.—WINTER SORROW.

A grey and leaden sky, without a break,
Shuts in the narrow world whereon I look,
And, day by day, mine ears almost forget
To miss the babbling of the ice-bound brook.
The woods stand rigid, ghostlike, draped in snow,
Life is no longer there, nor pleasant sound,
No breath is stirring in the bitter air,
To bid them drop their burden to the ground.
The drift lies deeply piled before my door;
My little garden, touched by Winter's breath,
Laid cold and smooth beneath his icy hand,
Looks stark and changeless as the bed of death.
'Tis thus my Heart, thy desolation chill
Holds me, like cruel Winter, dumb and still.

II.—SPRING SORROW.

Spare me that clear, triumphant song of praise,
Sweet thrush, with which thou welcomest the morn;
It wakes too keen a sorrow in my heart,
Who sigh to think another day is born.
Ye opening buds, ye sounds and scents of Spring,
So deeply interwoven with the past,
Ye touch the inmost fibre of my grief,
And bring the bitter memories thronging fast.
Not less the lilac crowns herself with bloom,
And bright laburnums shake their tasseled gold—
Nor does the violet breathe one odor less
Because my life is left me dark and cold;
Only while earth and sky such joy express,
I fain would turn me from their loveliness.

A. E. J., in the Spectator.

PRINCIPLES AND METHODS OF PRIMARY EDUCATION.

Notes from Lectures delivered before Primary Teachers at the Saturday Sessions of the N. Y. Normal College.

PROF. N. A. CALKINS.

OBJECT-TEACHING—COLORS.

Since the days of our great grandfathers, the great importance of attention to the "three Rs—reading, writing, and arithmetic"—has been enjoined upon children and teachers through successive generations, and to-day, familiarity with these studies is deemed indispensable to a good primary education. In view of this fact, it is not strange that the question should be asked: "Why teach children so many other subjects?" Especially might one who has not carefully considered how the child gains knowledge, and what constitutes an education, ask: "Why give children lessons on color?"

Let me assure you, at the outset, that I do not undervalue instruction in reading, writing and arithmetic. Indeed, I regard these studies as of the highest importance, and believe that they are indispensable in a good elementary education. I would not, therefore, have you relax your efforts in teaching these branches. My aim is rather to lead you to see how you may prepare your pupils for becoming much more efficient in their knowledge of each of these subjects.

When you consider the materials with which you have to deal in your work of teaching children who have not been trained in the use of their senses, even to that extent which would enable them to gain definite perceptions from the most common objects—children who have not learned to see accurately, and whose language is so undeveloped that they cannot tell what they see—children who have yet to acquire good habits of hearing, seeing, speaking, and thinking—children who have but a few ideas pertaining to any object—these are some of the conditions in which the primary teacher finds her pupils when they first enter school. In view of these facts, you cannot fail to perceive the necessity of first preparing these children to learn; of developing their unused senses and powers of mind before you can teach them reading, arithmetic and writing successfully. It must follow that those subjects which are adapted to develop and train the several powers of a child's mind are proper subjects for exercises of instruction.

In order that you may understand this matter more thoroughly, and know why you teach, and what subjects are important as a means of instruction in primary schools, I will state a few principles that govern correct teaching, and the acquisition of knowledge generally.

The child gains knowledge by exercising the several senses—seeing, feeling, hearing, tasting, smelling—in connection with various objects. The personal experiences of the child educates him. The contact of his mind with objects supplies him with ideas of those objects. Knowledge consists in ideas. Words do not represent knowledge to the young learner before his mind possesses ideas to be represented by them. Words must be intimately associated with things, actions and qualities in such a manner as to represent them to the child's mind, before the words can constitute knowledge to that child.

Ideas are obtained in different ways. Some can be obtained only through the sense of sight, as color; some only through the sense of touch, as rough, smooth, sticky, slippery, soft, hard, hot, cold; some only through the sense of smell, as odors; some only through the sense of taste, as sweet, sour, bitter, pungent, astringent, etc.; some only through the sense of hearing, as sounds, spoken words, music, etc. Of some objects, various ideas may be gained through several of the senses, as the shape of the orange by the senses of sight and touch; the color of the orange by the sense of sight; the odor by the sense of smell; and other properties by the sense of taste. The ease and accuracy with which ideas may be obtained in these different ways depend upon the degree of development which these several senses and powers of mind have attained.

If the only gateways through which the mind can hold intercourse with the world around it be but partly opened, or if freedom of communication be obstructed by neglect to use the proper means for such intercourse, the ideas obtained must be correspondingly dwarfed and imperfect.

It is a well-known fact, that the proper exercise of any power, whether physical or mental, increases that power. Exercise of the several senses is, therefore, the true means by which the power of gaining ideas may be strengthened, and the ability to acquire knowledge increased. It is also a well-known fact, to all observing teachers, that a large proportion of the young children, when they first enter school, have not learned to use their senses in such a manner as to enable them to gain accurate ideas. It, therefore, becomes a matter of great importance that teachers of young children should give special attention to providing suitable means by which their pupils shall obtain the needed exercises to produce the desired development of their powers of mind. If the exercises and lessons of the primary school are made what they should be, the pupils will gain the power of learning every kind of knowledge, while they are receiving instruction in the simplest elements of an education. This power can be but partially attained by learning to read, spell, count, and add. Such lessons do not supply the necessary opportunities for developing *all* the senses; they do not furnish such a variety of exercises as the condition of the child's mind requires to develop all its powers. Such modes of teaching, and variety of exercises as are furnished by true Object-Teaching, do supply the means for developing the child's powers in that manner which will lead to the attain-

ment of the best results in education.

Some of the natural modes for developing the senses of children, and training them to obtain ideas, is to lead them to exercise their senses in noticing differences in colors, shapes, qualities, etc., and at the same time giving them suitable words to symbolize and distinguish their ideas of the colors, shapes, qualities, etc., noticed.

The proper steps for accomplishing this would be—*First*, Lead the pupils to get the idea desired by seeing, feeling, tasting, smelling, or hearing, as the proper mode may be.

Second, Give the pupils words to communicate the ideas thus obtained to others.

Since teachers cannot get the ideas for their pupils, and since the words are of no use to the pupils without their corresponding ideas, and since language is based upon words that represent ideas to others, it is evident that the first work of the primary teacher should be to teach the children how to get ideas—in other words, to train them in the way to learn. This must be done by selecting and placing before them the appropriate materials, objects, qualities, actions, etc., and then stimulating their minds to act upon them through the appropriate senses. The second step of the teacher will naturally follow—that of giving words to represent the ideas as fast as they are gained. By this mode of teaching words, the pupils will always know the meaning of all the words learned. Still further drill should be had with these words, so as to include their sounds, spelling, and how to write them.

If children were not sent to school until they had gained a large stock of intelligent ideas from objects, and had learned to know by the ear and by use in speech the words necessary to represent those ideas clearly, the chief work of primary teachers would consist in teaching their pupils to know the words thus learned by sight, and how to write them. But this condition of development does not exist in the majority of children sent to primary schools. Their ideas and use of words are too limited to form a good basis for instruction without special training in the use of their senses, so as to give them facility in gaining ideas.

Children learn from that which interests them. They acquire habits and power of learning while gaining knowledge of a given subject. Sometimes the habit is more valuable than the knowledge itself. Sometimes the knowledge is most valuable. The aim of the teacher should be two-fold —development and instruction—and in this order. Thus the child's power to learn will be increased while he adds to his knowledge.

In view of the foregoing statements, I trust you will understand that some subjects may properly be used for lessons in primary schools, while the chief purpose in their use is to prepare the children for learning, reading, and spelling more easily and correctly; or where the aim is to train the pupils in habits that will enable them to acquire a thorough knowledge of any subject with far greater ease than they could do without such discipline of mind.

COLOR.—Lessons on color interest children, and thus become a ready means of training them in habits of attention. These lessons furnish excellent opportunities for comparison, and thus teach the pupils to distinguish resemblances and differences. The power of attention and comparison acquired by suitable lessons on color will increase the pupil's power of attention and discrimination when directed to other subjects, as reading, spelling, etc. When you know, as you may by experience with your own pupils, that the discipline of the powers of mind which may be had from lessons on color will prepare those children for learning other subjects more easily, you will be able to give an intelligent answer to the question, "Why give children lessons on color?"

But there are still other reasons for giving these lessons. A general knowledge of colors is of importance in almost every avocation in life. This becomes especially apparent in the preparations of materials for dress, household decorations, painting, and in various manufactures, trades, etc. From the fact that many persons are found to be color-blind—*i. e.*, unable to distinguish even some of the most prominent colors, or to tell which of two colors is red, or which is green—it is of great importance that each person should be led to know whether he or she has this defect or not before engaging in any occupation in which the ability to distinguish different colors is an indispensable qualification.

Beside much of what at first appears to be a physical defect in not correctly distinguishing colors, probably may be removed by leading children to give such careful attention to colors as will train them to distinguish the most prominent colors with ease. The possibilities in this direction are sufficiently strong, and the importance of knowing whether such a defect as even partial color-blindness exists in a child, before he is old enough to choose his life avocation, is a matter of so great consequence that attention to this subject cannot be neglected with impunity in primary school training.

Having endeavored to make you understand *why* the subject of *color* may be used for lessons in primary schools with profit to the children, I will now invite your attention to some of the ways in which lessons on this subject may be given, for the attainment of these ends.

HOW TO GIVE LESSONS ON COLOR.

Among the first inquiries of the teacher, as she is preparing to give a lesson on color, will occur questions similar to the following: What facts about color should I teach my class? How shall I present the subject of color to my pupils? What objects or materials do I need to illustrate lessons on color? Why do I teach color?

Even at the outset, there is some danger that you may take steps in the wrong direction. You will mistake the chief aim of these color-lessons if you suppose that your object should be to teach the science of color. The first inquiry may lead you astray, unless you understand why you teach this subject, and keep the aim of your instruction in remembrance. You may fail to accomplish the end in view

if you teach facts only. Let me remind you that inasmuch as the child can learn to know color only through the sense of sight, you must place colors before your pupils, and lead them to distinguish and name the different colors.

It is important that children should obtain correct conceptions as to which of the colors are good *reds*, good *yellows*, good *blues*, good *greens*, etc.; therefore, care should be taken to show them good specimens of these colors during the first lessons. It does not matter which colors you select for the first lessons, provided you have the materials for representing them well. The color-charts with the box of color-cards, which are supplied to each of your schools, will furnish you with good materials for representing the colors with sufficient accuracy for the purposes of these lessons. To the chart of colors it is desirable to add colored cubes, colored silks, worsteds, colored crayons, and, what would be better still, procure tubes of oil colors, or water colors, such as artists use, also a small palette and palette-knife. Three colors will be sufficient. For *red*, get *carmine*, or *Chinese vermilion;* for *blue*, get *ultra-marine*, or *cobalt* blue; for *yellow*, get *chrome;* and for making light colors, get a tube of *white*, which you may mix with either of the colors to make them lighter, as you desire. With these colors you can show your pupils excellent specimens of the three *primary colors;* and also illustrate the manner of producing *secondary colors*, by mixing two primaries for each secondary.

Having selected and arranged your materials for illustrating the lessons on color, proceed to show a color, as the *red*, by placing your color on the white palette and spreading it with your knife. Compare the red cards, red cubes, red silk, red paper, etc., with this, and lead the pupils to notice their resemblances; then compare with it reds that differ from your representative of a good red.

For the second lesson, place before your pupils the chart of colors, and, taking the red cards from the box of color-cards, also reds of other materials, request the children, singly, to match the best red.

Proceed in a similar manner with *blue* and *yellow*, giving two lessons with each color. Afterward give a lesson with these three colors, requesting children to match those named.

Lessons may be given in the same way with *green*, *purple*, *orange*, etc. In later lessons the children may be led to distinguish and match light and dark reds, yellows, blues, etc., using various colored objects.

Such lessons as I have described may be given to children during their first year at school. Each lesson should be brief, occupying from ten to twenty minutes at one time. The first lessons, which ought to be short, should embody illustrations by the teacher, calculated to attract the attention of the pupils. Subsequent lessons, which require more activity on the part of the pupils, may be longer. The order of giving these lessons may be stated briefly, as follows:

First—Showing by the teacher, and seeing by the pupil.

Second—Pointing out, or otherwise representing by the pupils, what was shown by the teacher.

Changes in the mode of illustrating the lessons increase the interest of the children in the lessons; and changes in the modes by which the pupils represent what they know of color, add interest to these exercises. Avoid, therefore, the use of stereotyped forms of giving the lessons which may lead to a mechanical routine. I will mention some modes for giving these lessons that, with a little thought on your part, will enable you to make such changes as will keep alive the interest of your pupils as long as it may be desired.

Place the chart of colors before the class; call out two pupils; let one take a pointer, the other a color-card, and show it first to the one holding the pointer, then to the class, while the one with the pointer tries to point to the same color on the chart—the class say "right" when he succeeds. As these two pupils return to their seats, two others may be called out and proceed in a like manner with other colors.

This form of the lesson may be changed by calling out three pupils at a time—one to select the pointer, one to select the card of the color named by the teacher, and the other one to take a colored crayon resembling the color of the selected card; and while the pupils with the pointer and the card proceed as before, the one with the crayon makes a mark on the blackboard to show that he has selected the right color.

For another exercise, let a pupil stand by the table on which a variety of colored objects are placed, and, as one member of the class after another names a color, he is to try to find it, and hold it before the class, which may say "right" or "wrong," as the case may be. When he fails to select the color named, promptly, the one who named it may go and find the color, then take the place at the table, while the first pupil returns to his seat. During this exercise, the aim of the class will be to name a color which the pupil does not know well enough to select promptly, and thus send him to his seat, while another takes his place at the table.

For another mode of leading pupils to represent colors, procure colored tissue or motto-paper—red, yellow, blue, purple, green, orange—and distribute them among the pupils, so that each shall hold one color. The teacher may take one each of all the colors, and as she holds up one, the class may name the color, and each pupil having the same color may hold it up. Proceed in the same way with each color represented. Then the teacher may name a color, as "blue," and each pupil holding a blue motto-paper may stand, holding the paper against his breast. Sometimes let a member of the class take the teacher's place, and call for those with the color named to stand. The monitor pupil will say "red"—and all having that color will stand instantly—and so on with the other colors. To distribute and collect these papers in an orderly way, they may be placed upon slates, and one slate passed to each row of seats.

For another mode of using these colored motto-papers, distribute one to each member of the class as before. Let the two first pupils stand, each holding her colored paper in front of her; one may ask: "What is the color

of my paper?" The one asked replies: "Red," or "blue," as the case may be, and at once turns and asks the pupil next to her: "What is the color of mine?" She answers, and in turn asks the next the color of her paper. In this manner the questions go around the class. Should a pupil asked fail to give the correct answer promptly, she must take her seat, and the one that asked the question will repeat it, to be answered by the next in order.

These different modes of conducting the lessons on color may be changed once in three or four weeks, as the interest of the pupils seem to require. By these changes the pupils will not become weary of the lessons before learning all that is aimed to be taught by them. The children should also be encouraged to observe the colors of flowers and other objects, at home, and to tell the name of the colors thus observed. With young children the color lessons may be given daily, or every other day; while with more advanced primary pupils one lesson each week will suffice. In each case, both the length of the lessons and their frequency should be adapted to the other school exercises.

The next subject for consideration will be *Methods for Teaching Primary and Secondary Colors; also, Harmony of Colors.*

THE SCIENCE OF READING.

A. G. MERWIN.

Of all the studies pursued in school, reading, no doubt, stands first as to value. Reading is an adjunct or accessory in the pursuit of all knowledge, except that gained through original investigation. While in reading, the mind may not engage in its highest exercise, that of the first discovery of truth, it saves time and effort by availing itself of the thought and experience of others. Few have time, and fewer still have the disposition and ability, to seek out first truths for themselves. It is by reading that we gain the greater part of that portion of our knowledge which lies outside of our daily experience. To a large extent, our knowledge will be wide or narrow, and our opinions true or false, as our habits of reading have been good or bad.

I do not refer to what may be termed elocutionary reading. He who has witnessed the heart-rending struggles of professed elocutionists, must be convinced that few can attain to fine elocutionary reading, were such an attainment desirable. Elocutionary drill is of use to those who have the time, in that it forces the attention back to the feeling and thought in order to give correct expression.

But our great want is not elocutionary reading, nor even oral reading; it is thoughtful, silent reading. What we seem to need more than anything else—I had almost said more than everything else—is such culture that

the reader on the cars, in the office, at school, at the fireside shall read the best literature of the day, and *know what the writer means.* Extraordinary efforts are made to teach composition; but why should one write who has nothing to say? The art of composition is of value to all, and especially valuable to a few; but where one writes a hundred read. Teaching should be of that kind which will most enhance the value of universal silent reading. We need better silent readers, who shall go beyond word-calling, and make reading more an exercise of thought. The daily press, magazines, books of philosophy, science and art, not to mention the mountains of fiction under which we groan, require readers who habitually look through the film of fine phrases and see what of truth and worth there is beneath. We forget what we once knew, but we never forget the habit by which we learned; hence, the habit of discerning and, as far as possible, of thinking the thought of the writer, is of inestimable value to all who read.

Neither is it easy to create good habits of silent reading. The very process of learning to read tends to form a habit which, in a measure, defeats the object of reading. This will appear from various considerations.

If we observe persons in animated conversation, we notice that there is a two-fold expression—an expression of thought through combinations of sounds, pauses, inflections and emphasis—and an expression of feeling or emotion through the tone in which the words are uttered. When we add to this two-fold expression of thought and feeling, that the reader must give much of his attention to the forms of the words, thus distracting the mental force that should appear in expression, we infer that there must be a loss both in the apprehension of the thought and in its expression. Again, it is an axiom that force expended in producing an effect in one direction, cannot at the same time produce an effect in a different direction—that is, the force used in attention to the words and expression of the thought, cannot give so effective expression as if used in expressing thought and feeling only. Further, we should expect that a speaker who reasoned with accuracy and force could not, at the same time, appeal to the emotions of his audience; also, that a speaker who habitualiy appeals to the feelings of his hearers, would be likely to give very few and very unsatisfactory reasons. Even language itself confirms the truth, in that it cannot, at the same time, be profoundly logical and strongly emotional. There is no emotion possible in the language of a mathematical demonstration, nor is there reason or logic in the language of impassioned appeal—that is, language in its growth has conformed to the necessary methods of human thought and feeling, thus indicating most clearly a necessity for the concentration of mental force in one direction in order to produce the best results.

To follow the principle one step further, we observe that strong emotion is silent. As soon as the force which exists in emotion or passion, finds expression in words, tears or physical activity, the feeling necessarily begins to subside. Boisterous grief is of

short duration. In all these examples, the principle is the same, that a given amount of force can produce a corresponding given effect; that, as we distract this force and direct it toward several ends, we weaken the effect in any given direction. To be specific, by dividing mental force between word-calling and thought-expression, both are necessarily imperfect.

Aside from all inferences, one has but to observe a public speaker in that part of his discourse in which he is confined to his notes, to see how much force is lost in the distraction of reading. There is no public speaker of note that would not endanger his reputation if obliged to read his discourses. Is it a wonder that children fail, where thoughtful and cultured men do not dare to venture?

For a considerable length of time, the child must have his attention and mental effort mostly absorbed in word-calling, depending upon his memory of words, or upon imitation of the teacher for what little expression he may attain. Even here, there is a danger that he may use a single word as a key, and recite the sentence from memory, never reading at all with the eye. The inherent difficulty in teaching reading is, that we necessarily force attention to words—nay, worse than this; if, in a moment of active thought, some bright pupil should discard the word in the book and use some fit word of his own, disgrace is the price of his thought, and his mind is driven back to feed on wordy husks.

Having habituated the attention to words, we next wonder that children and persons older than children also do not understand what they read. We have given them habits of word-calling, and expect habits of understanding. We expect to reap what we have not sown. I do not say that it is possible to avoid something of this result. I wish to indicate that true reading, thought-reading, is a very difficult attainment. Having felt that there is a difficulty, we shall be better able to elevate reading above word-calling, above all elocutionary display, and make it the medium of thought.

A suggestion or two may not be out of place. During the word-calling period of reading, the thought should be so simple and familiar as to require little effort of the mind, in order to be understood, thus leaving the attention free to observe and call the words. In more advanced or thought-reading, the words should be simple, so that the attention may be given to the thought. The pupil must be made to realize the thought of the writer. If a definition be given, as of the diameter of a circle, questions like the following will call attention to the thought: Where are the extremities of the line? Through what part of the circle does the line pass? What kind of a line? Name the three items that make this a definition. The object is not simply that the learner may see the truth, but that he may see the truth *through the language*, thus making the exercise one of thought-reading. Object-teaching, useful as it is in its place, is most mischievous if it attempts more than to give a needful basis of experience. Experience is the foundation on which the memory and imagination erect mental structures, suggested by reading.

Again, read and question as upon

the following four lines, so that the pupil must, to some extent, re-think the thought of the writer.

> The breaking waves dashed high
> On a stern and rock-bound coast;
> And the woods against a stormy sky
> Their giant branches tossed."

Where is this picture? What is a wave? What is a breaking wave? Why *rock-bound* coast? To what appearance does *stern* refer? What are woods? How could the branches be tossed *against* the sky. The object of all questions being that the reader shall see the picture as the writer saw it; for these four lines are a word picture. What is the advantage, if the words are called and the picture is not seen?—I know it will take time, but there will be a little gain in knowledge; there will also be a gain in the power to transfer word pictures to the mind. When the habit of seeing mentally is once formed, a power is acquired that makes silent reading a fountain of knowledge. The reader can then glance over pages, see the pictures—for thoughts are but mental pictures—that are worthy of study, and reject the rest.

In thoughtless reading, there is no gain in knowledge, and there is a loss in habit; while in thoughtful reading there is a little gain in knowledge and culture, and a little strength given to a good habit. It is better to gain this little than to rattle on, and in the end have words, nothing but words.

It does not seem an extreme statement, when it is said that we need educationally more than we need anything else, the power to comprehend, weigh and measure thoughts expressed in language.

THE PHILOSOPHY AND METHODS OF PRIMARY INSTRUCTION.

SIXTH ARTICLE.

BY JAMES CRUIKSHANK, LL. D.

Because no one has as yet given us a manual on "Object-Teaching" that is either practicable or fruitful, it does not hence follow that we are to discard objective-teaching. If it cannot be formulated, it is, perhaps, because it concerns the method of procedure, and not the matter to be taught; and that matter, so far as it is truly objective, will vary according to the knowledge, tact, and skill of the teacher and the genius of individual pupils, as well as according to the thoroughness with which pupils are grounded at any stage, in preceding studies, and, in some degree, according to the spirit and fruitfulness as an educational force of the home-life.

We may state a few conditions under which the method must be objective, and when these are fully apprehended, the Rend. method and extent of such instruction will be more apparent.

First. In elementary instruction, no definition should be given until, by the exhibition of the object, when necessary, a proper illustration of the

thing to be defined, or the quality, property, or relation under consideration, it is as a fact or truth apparent to the mind of the learner.

Second. No rule of operation, as in arithmetic, grammar, and the like, should be committed to memory until the process, of which this rule is a succinct statement, has been fully comprehended.

Third. Most lessons, as in history and geography, should be, beforehand, so far illustrated by their teacher—their scope and intent pointed out—that the pupil has some idea of what is expected of him, and some just notion of the most fruitful method of study.

We judge that one of the most serious obstacles in the way of rapid and thorough advance, as well as one of the most serious causes of the dislike of study so general among pupils, arises from the failure to observe such conditions as these.

We may put formal object-teaching, when pursued as it often is, apparently as an end, and not as a means, of development and culture, side by side with the opposite absurdity of a dull, lifeless task-getting, that memorize words and measures the pupil's attainment by his ability to answer the stated questions at the bottom of the page, or show his respect (?) for the book-maker by *verbatim et literatim* following of the text.

Not long since, we were unwilling listeners to the "recitation" of a lesson that had been several days in the process of incubation. The hard geographical names seemed to have found harder skulls to penetrate, and even if Ecuador and Parana and Rio-de-la-Plata came at last, it was only to be forgotten when the irrepressible boy, released from durance vile, reached the free open air, and with glad shout flung defiance at Bolivar and Guyot, and forgot the old Hidalgos who invented any South America at all.

There was no *real* South America to him — no winds laden with the treasure of the ocean sweeping against the rock-ribbed mountains, and pouring down their ceaseless torrents to swell the mighty Amazon—no life-giving sun to lift out of the myriad-streamed plain, an endless forest of ever-living trees, hung with vines like typhons clinging and mounting to the upper air, radiant with the gorgeous plumage of birds and insects that keep perpetual holiday. The imagination was asleep, and the poor colored patch of paper, with its black lines and meaningless names, menaced the tyro, and, like the stony-eyed sphynx, propounded a perpetual riddle.

And history, too—what a satire on human knowledge; and the means for culture is most that serves under that name for tasks! The books are bad enough, with their statistics of the men killed and wounded on the gory field, exact to a unit, as if one were buying vegetables at the corner grocery; but in the teaching, how little of the living, moving, surging mass of human life rushing to victory or defeat, appears a story of the 7th Regiment, that passed your office on parade, or of an old-fashioned general training, told to a child, excites more of wonder and interest than for the most part accompanies the account of Saratoga or Yorktown, Waterloo or Balaklava, Gettysburg or the march to Richmond.

Must this be ever thus? Will not teachers learn that the things not written, and that cannot be written in the manual, are of more account than the skeleton that but suggests the form of the living, breathing force pulsing with life, and full of inspiration? The *preparation for the lesson*, and the spirit that enters into it with such heartiness that its dull words glow and sparkle with thought—these are the sources of teaching power.

SPELLING.

(From the Saturday Review.)

The amusement called a "spelling-bee" has the advantage of being cheap and easily got up, and it may be useful in helping to shake off the common aversion of Englishmen to opening their mouths in public. Almost the only objection is that, unless tolerably big words are used among fairly-educated people as tests, there cannot be much risk at failure, and people who find that they can spell big words correctly may be too apt to make familiar use of them. The notion, however, that correct spelling is to be expected from those who have had ordinary opportunities of education is modern, and it would be easy to attach too much importance to the want of it. The Duke of Marlborough's letters are always quoted as an example of the deficiency of a remarkably able man in knowledge which is now required in every school-boy. But it must be remembered that even in the polite age of Queen Anne, people wrote far less than they do now; and as long as words are used chiefly in conversation, it is difficult to say precisely what is right and wrong. There are, indeed, and for a long time past have been, certain books of which one would be ashamed to confess ignorance, and which could not be read attentively without learning to spell as many words as would serve the ordinary purposes of life. As an indication of want of knowledge or of interest about such books, incorrect spelling might reasonably be thought disgraceful. But if the failure only occurred in pollysyllabic words, we should be disposed to view leniently an indication of imperfect study of certain newspapers. We have before us a provincial journal, which, in describing a spelling-bee, states that "it was discovered that an individual had escaped an interrogatory by changing his seat." It would have been difficult for the writer, who had probably been at the trial himself, to consent to say that "it was found that a person had escaped a question." Long words are like fine clothes. If we have them, why should we not make use of them? We do not know the precise meaning of "bee," but, if we conjecture rightly, we shall expect soon to hear that an "orthographical conglomeration" has been held in some provincial town. It is wonderful, if we come to think of it, how much force and charm of language may be gained without ever troubling the long words at all. The

beautiful lines beginning, "Drink to me only with thine eyes," have been often quoted to show this. Another instance is the speech of Hamlet, "To be or not to be." Or take the text of Jeremiah which denounces one of the kings of Judah, "O earth, earth, earth, hear the word of the Lord," etc. Or the words of the burial service, "Man that is born of woman," etc. Or Pope's "Universal Prayer." Or several stanzas of Gray's "Elegy." Or the lines in which Scott describes his countrymen's stubborn fight in Flodden. All these, and many more of the best-remembered passages in English literature, might be searched in vain for words hard enough to set at a spelling-bee.

In some remarks on spelling, which were written about forty years ago, we find the sensible rule laid down that the contemporary usage of persons of cultivation is the authority to which each person who aspires to write correctly must defer. The writer gives some examples in which variety of usage existed at that time, and if he be accepted as sufficient authority, it follows that, at the time he wrote, "complete" and "compleat" were equally right, or at least neither was wrong. But we fear that, if the latter form were produced at a "spelling-bee," shouts of laughter would proclaim that the respondent's chance of the prize was gone. In Ainsworth's Dictionary of 1751, both "complete" and "compleat" are given in the English-Latin part, although it would appear that the latter is preferred; and, in the Latin-English part, "completus" is rendered "compleat." In the middle of the last century "expence" was usual, and we could not now say that it is exactly wrong, although we should certainly write "expense." The writer of forty years ago gives us another example, "allege" and "alledge," but usage has now determined against the latter form. The dispute between "inquire" and "enquire" is not yet settled, nor could we say that "connection" is wrong, although we should write "connexion." It appears that at the "spelling-bee" the word ecstatic was deemed to be wrongly spelt with "x," but this was usual in the last century. If the competitors were taken from the working class, we should not be surprised at the form "steddy" being produced. In the middle and upper class, this would not be likely, yet we find this form, and not "steady," in "Pope's Works," printed in 1766. The same book shows that "sallad" was then usual, and "smoakless." We find, also, "oeconomy," from which, since it became political, a letter has been retrenched. We also find "chearful" and "develop." But it is surprising to turn over many pages of this edition of Pope without finding more than very minute differences from the spelling of the present day.

A knowledge of Greek and Latin must save competitors, in spelling, from many pitfalls. If the ladies who gained distinction were ignorant of these languages, they must have been gifted with retentive memories. Take, for example, such a word as "sympathetic," and it would seem quite possible for a person who knows no Greek to put "i" for "y." And in "metamorphosis," there would be an

opening for "f." A mistake would be easy in "internecine" or "parallelogram." It might, perhaps, be said that it would take longer to learn Greek and Latin than to learn spelling, as a mere collection of instances without principles, but the latter would be very hard work. It is difficult enough for anybody to learn English spelling, because of its irregularity. The rule which compels us to write "succeed" and "precede," is merely arbitrary, and even some educated people have to think twice before putting on paper "believe" and "receive." We have now settled to write "surprise," but in the last century this and other compounds of the French *prendre* were written with "z." A place in a spelling-class ought not, we think, to be lost by using "z" in any of these words. But a person who knows French would prefer to write these words with "s," just as a person who knows Greek would write "analyse," although we find this word spelt with "z" in the edition of Pope before referred to. The word "schedule," which was lately set, is a trap, at least if it be pronounced, as some people pronounce it, softly. It is usual, in correspondence, to speak of an "inclosed" letter, but Parliament still passes "enclosure acts." Such words as abridgment and irreconcilable are thought by many people to want another "e," and, whatever be the correct rule, it is certainly convenient to drop an unnecessary letter. The old-fashioned pronunciation of "obliged" may have led many into what can hardly be called an error. As for "honourable," and other words of the same class, there will perhaps never be, and there certainly is not, agreement. We should write of the "license" of the press, but acts of Parliament require publicans to take out "licences." It is perhaps desirable to be strict in spelling, because pronunciation varies, and if spelling followed it there would soon be no standard of correctness in speech. But it is possible to carry accuracy to an extreme. There is a wide difference between spelling "supernumerary" without its penultimate syllable, and spelling "postillion" with one "l." The former, if not carelessness, must be gross ignorance, like that shown in spelling "quadrilateral" with an "o" in the last syllable, or "commensurate" with "o," instead of "u." Here, again, a small knowledge of Latin would have prevented mistakes which seem to have arisen from an untutored ear listening to a vulgar tongue. A person who said "quadrilatoral" or "commensorate" must have escaped the influence both of school and society. We saw lately a lady's letter, in which "areas" was written for "arrears," and it might be charitably thought that ignorance of the thing made her unfamiliar with its name. In the strictest age of pleading and practice at common law, the principle *idem sonans* was applied, and we think the same principle ought to prevail to some extent in a "spelling-bee," but it is difficult to say how far. If this amusement becomes fashionable, there will no doubt be dictionaries expressly printed for it, with a set of rules, and it certainly would promote more accurate knowledge of our language. When an assembly receives

the spelling of "ecstatic" with an "x" with shouts of derisive laughter, it is evident that many people have a good deal to learn. But the spelling of "cynical" with "le" at the end, instead of "al," shows ignorance of the meaning and origin of the word, and that sort of ignorance may fitly excite derision. The lady who had to spell "aurora borealis" could scarcely go wrong, unless she was very ignorant or very careless. When we have once heard and understood this word, it would be difficult to misspell it.

The popularity of these competitions in the United States is one of many fortunate circumstances of that country. It cannot be too often impressed on American speakers that when they come to write they must add a "g" to the word which they call "fixins," and that they must not spell calculate with an "i." It might be awkward if the manager of a "spelling-bee," either in America or here, pronounced words as he hears his friends and neighbors speak, and then applied the standard of some dictionary to the spelling of them. It appears that a "spelling-bee" has lately been "inaugurated" at Gloucester, and it is proper that a big word should be made to do duty on this occasion. This competition was finally decided on the word "ecclesiastic," and it may be inferred that the person who failed to spell it correctly had never heard it before, and did not know whence it came, or what it meant. Spelling such words as this is a test, not so much of spelling as of the general education and associations of the competitor—not that that is an objection to them. The same remark might be made on "millennium," with the addition that failure in this word would imply ignorance of Latin, which it is hardly expected that a commercial clerk should know. Some years ago a bet upon the word "reindeer" caused great excitement in the sporting world. It was alleged that the gentleman who induced a friend to bet on the spelling of this word, had looked beforehand at a dictionary. But, on reference to several dictionaries, it appeared that both "reindeer" and "raindeer" were recognized. It is stated that at Gloucester failure occurred at such words as, among others, "broccoli." Now, on referring to the first dictionary we have at hand (an English-Latin one of 1848), we find "brocoli." Yet it would appear that a competitor was disqualified for adopting this form. People of rather wider views as to language should, if possible, take the direction of these competitions.

THE JOURNAL OF EDUCATION,

NEW YORK.

Subscription to THE JOURNAL, ... Two Dollars and a Half a year, payable in advance.

Twenty-five (25) *Cents per Copy.*

The Editor does not hold himself responsible for opinions expressed by contributors or correspondents; nor can he undertake to return rejected manuscript. No notice taken of anonymous communications.

Communications intended for the Editor must be addressed, care of ***Box 3001, New York.***

Business Communications to be addressed to, and information obtained at, the Office of the Business Manager—***751 Broadway,*** opposite Astor Place, ***New York City,*** where subscriptions, advertisements, etc., will be received and single numbers of the JOURNAL procured.

A liberal commission will be paid to one responsible party in every city or town who will canvass for subscribers.

An advertising agent is wanted in every large city, with whom liberal arrangements will be made.

NOTICE.

Our subscribers will please take notice that the first year's subscriptions will expire with this number, and, with March, the second year of THE JOURNAL will begin. Among our contributors for 1876, it affords us much pleasure to announce the names of Mr. HENRY KIDDLE, City Superintendent for this city; Professor HUNTER, President of the Normal College; Professor SCOTT, of the College of the City of New York.

With this number, we present the first of the series of papers from Professor CALKINS. In addition to our regular issue, which will be a large one, we will be prepared to supply Professor CALKINS' papers separately, by mail or otherwise.

Our exchanges will please note our change of address.

THE "NATION'S" CRITICISM ON INDUSTRIAL ART EDUCATION.

There is, perhaps, no subject of criticism requiring so much of mingled experience and generalizing power in the critic as that of education; and if there is one branch of it which we Americans know less about than another, it is the subject of Drawing. Those who are engaged in the work of education are not always the best critics of its modes and results, whilst mere theoretical knowledge of the subject, without experience in the actual work, is of no practical value. Yet, in fact, we find that the task of educational criticism is confided to almost any one who will assume it, and the vast interests which the community have at stake in this matter are handled in even influential journals with a flippancy and superficiality which call for condemnation by all educators.

The country is awaking to the great importance of industrial drawing as the creator of skilled labor; and remembering how vast are the great industrial interests of the United States, it is manifest that unskilled labor, if it be, as is asserted, less productive and less valuable than skilled labor, is a very costly and burdensome thing. But the laborers who come to us in the greatest numbers from abroad must be described as unskilled, and until recently we have had no agencies by which skill and taste in the constructive arts could be acquired by American-born citizens. And thus

we have been in the somewhat anomalous position of a great industrial nation, providing no means by which the native or imported labor of the country could be trained into skilled labor. This has been the condition of every civilized community at some period of its history, but a condition that has, for economic reasons, been superseded by a better, in every country but our own. Efforts to increase the value of labor, by the infusion of taste and skill into all branches of industry, are of the greatest possible significance, to be very carefully considered, and, recognizing their importance, they should be reviewed only on a thorough knowledge of the means employed and the end sought. Unless this responsibility be felt, and this qualification be possessed by the reviewer, we shall see the best educational efforts hindered and confused by incompetent critics, without any regard for the mischief they unconsciously bring about.

We are led into this train of thought by two criticisms which appeared in the *Nation*, of December 30 and January 27, upon the teaching of industrial drawing in Massachusetts—the first being a review of the Boston Drawing Committee's report, illustrated by heliotypes of drawings made by pupils in the schools; the second, an attempted justification of the first. From the position which the *Nation* holds in the worlds of literature and fine art, it has the opportunity of directing or misdirecting public opinion on analogous subjects, entailing a responsibility we hardly think it has felt, and incurring, by such criticisms, one that will be hard to bear. It would be a matter of no importance that such criticisms should be written, if the subject of it were as familiar to the public here, as it is in other countries; because the question there has been discussed and practically settled by long and careful experiments, and the views urged by the *Nation's* critic have been long since discarded as narrow and visionary, so that their serious resuscitation would be met by the ridicule they deserve. Here, however, the whole subject is a new one; and when a leading paper comes out with an *ex-cathedrâ* utterance, in which there is not the slightest attempt made to justify itself by reference to any authority, past or present, the public, which knows little or nothing of the subject, may be thereby misled to its own hurt.

We propose to show two things very clearly about the *Nation's* criticism; the *first*, that the views expressed concerning art education are in direct opposition to those of the best authorities, and are purely visionary; *second*, that the writer, by the evidence of his own language, is utterly incompetent to criticise the subject, through want of knowledge.

The great charge made all through the criticism is, that teaching drawing on a basis of geometrical forms, and design by a system of geometrical arrangement of conventional forms, is wrong in principle. A quotation of some short and singularly-oracular utterances in the review will clearly show the writer's position, and then we will see what other great minds have thought on the same subject.

From the *Nation*:

> The objects of mechanical drawing, and of

drawing for the purposes of artistic expression, are not to be reached by the same processes. They have little in common, except the use of the same materials.

Mechanical drawing has nothing to do with art proper.

Designers require training of a purely artistic kind, which cannot be provided unless the mechanical element be kept out of it.

These may be described as the damnatory clauses which the creed of the critic contains; and, further on, when describing the system of teaching which includes mechanical drawing, he adds:

Its mechanical character is actively destructive of artistic sense, alike in producer and consumer.

The critic's central article of faith is thus expressed:

Art instruction is properly directed towards purely æsthetic culture alone—æsthetic, that is, in the sense of the term which includes a moral element.

All these statements may be true; but if they are true, then the greatest art critics and artists, past and present, have been hopelessly wrong in their views. Finding, in a recent number of the Boston *Advertiser*, a communication on this same subject from a member of the art club, which exactly represents our own ideas, we here offer it, containing, as it does, the testimony of Albert Durer, Leonardo da Vinci, and of a distinguished French critic—Mons. Bachelier.

A little further on we shall oppose the matured opinion of Owen Jones, the English ornamentist, to the critic's dictum about conventional ornament, and thus place the best authorities of Germany, Italy, France and England in opposition to the critic's views.

ART AND SCIENCE.

Looking the other day at an unfinished picture by Gérome, in which the perspective lines of a room, intended as a background for a single figure, were ruled in upon the panel by a professional draughtsman, I could not help thinking how astonished the old artists of the fifteenth and sixteenth centuries would have been had they been told that eminent men of their profession in the nineteenth century would consider it no shame to be ignorant of that science of perspective which they prized so highly and studied so deeply. In our day, unfortunately, the divorce between art and science, like that between art and industry, has become so absolute that, although the prospects of a re-union are constantly brightening, to many ears the coupling of the æsthetic with the scientific or the useful still sounds like a profanation. For the mere purpose of proving how false this modern idea is, and how widely it differs from that which prevailed at great periods of art history in different countries, I would ask you to print the following quotations from writers whose authority none will dispute, as two of them stand among the immortal few whose names are typical of possible perfection in pictorial art. The modern doctrine, as stated by a late writer in one of our leading American journals, is that "art instruction is properly directed towards æsthetic culture alone." We leave it to your readers to judge how this tallies with that preached by Albert Durer and Leonardo da Vinci, as here set forth:

"THE GERMAN THEORY.

"Many talented young men in Germany, says Albert Durer, have hitherto been allowed to learn the art of painting without any scientific basis of instruction, and solely through daily use. They have, consequently, grown up in ignorance like wild, unpruned trees, although some of them, by dint of long exercise with the brush, have attained a certain freedom of hand which has enabled them to make their work powerful, though ill-considered, and only by accident."

The above passage is extracted from the dedicatory letter prefixed to the following work:

"Instruction in Geometry with the Compass and Ruler, in lines, flat surfaces and solid bodies, collected by Albert Durer and published for the use of all lovers of art, in the year 1525." This work was intended to give necessary instructions to all artists, and not only to painters, sculptors, goldsmiths, etc., but also to stone-cutters, joiners and all other mechanics.

"THE ITALIAN THEORY.

"[Extracts from the Treatise on Painting by Leonardo da Vinci.]

"HOW PAINTING SHOULD BE STUDIED.

"Study first the science and then follow it with the practice born from that science.

"HOW FAR THE SCIENCE OF PAINTING EXTENDS.

"The science of painting deals with all the colors of surfaces and forms of bodies, and with their nearness to or remoteness from the eye, as also with the proper gradations of size, as determined by degrees of distance from the spectator, and this science is the mother of Perspective, the science of visual lines.

"WHAT THE YOUNG OUGHT FIRST TO LEARN.

"The young artist should first study perspective; then the correct measurement of bodies (geometry); then, little by little, he should accustom himself under a good master to sound methods of work; then he should study nature, that he may comprehend the reason for the things which he has been taught; then he should for a time examine the manner of working peculiar to many great masters, and finally accustom himself to the practice of art."

We will conclude with two extracts from Bachelier's Memoire of the Royal Free Drawing School, published at Paris in 1774:

"THE FRENCH THEORY.

"Instruction in all branches of art should commence with geometry; it alone can keep the imagination within the due bounds of reason, and cause, if I may so speak, ideas to circulate in regular channels. When its principles have been neglected, ornaments are tastelessly scattered about in all kinds of work under the pretence of producing a picturesque effect.

"To instruct the young in the principles of geometry is to render them the greatest service. Not only does this science develop the intelligence, but it makes precision habitual, thanks to the exact knowledge which it gives of the dimensions of all sorts of bodies considered under different aspects. Without knowledge of geometry, the artist, uncertain of his result, works blindly. Led by ignorance, he drags the young confided to his care from error to error."

Did time allow, many other extracts might be given from high authorities to show that art must rest upon a scientific basis if it is to be enduring, and endless examples cited to show that all great works of art do rest upon such a foundation.

The conclusion is, therefore, forced upon us that a scientific basis, or what the critic calls (in a confused way) mechanical drawing, is the necessary preparation for success in all art, fine and industrial, although the *Nation* says that "purely artistic training for designers *cannot be provided unless the mechanical element be kept out of it.*"

To those who have not had a professional training in art or art education, but who still are capable of estimating the value of evidence, we would suggest that in this matter the testimony of the *Nation*, on the one hand, and of Albert Durer, Da Vinci and Bachelier (three respectable names in art), on the other, are directly contradictory, the one to the other, and both cannot be right.

Whilst exercising the right to choose between these conflicting authorities, and unhesitatingly placing ourselves on the side of the three representatives of the three most artistic of European nations—Germany, Italy and France—we shall proceed to show our *second position*, and, in establishing the ludicrous incompetency of the critic, justify ourselves in refusing to aban-

don the truth, as it was in the fathers, for so shallow a modern guide.

We will quote several sentences from the criticism and comment on them:

> In plate 5, we have outlines of the cone and cylinder, which would be all very well as exercises in solid geometry, but it (*sic*) serves no proper purpose in elementary art.

First, refer to Mons. Bachelier, who says, "without knowledge of geometry, the artist, uncertain of his results, works blindly;" or to Durer, "without any scientific basis of instruction, they have consequently grown up in ignorance like wild, unpruned trees;" or to Leonardo, "the young artist should first study perspective, then the correct measurement of bodies (geometry);" and here we find the *Nation's* puerile doctrine difficult of belief. Moreover, it may as well be stated, that there is not in existence, at present, and there never has been in existence, any great art school or system of art instruction in the world, in which the forms of geometric solids, such as the cone, cylinder, etc., are not employed as subjects of elementary instruction by which to teach principles of representation. The general use of geometric solids by which to teach drawing is the secret of French skill in drawing, for pupils who have been taught principles thoroughly, easily apply them to any irregular form.

Further on, the critic says: "Plant-form, made rigid and symmetrical, is an enormity in design."

The terms rigid and symmetrical mean the conventionalization of natural forms for design, rather than their imitation naturally. If the critic's utterance is correct, then the following styles and schools of ornament have been enormities—viz.: the Greek, the Gothic, and the Renaissance, all having used plant-forms rigidly and symmetrically; yet as these three schools of ornament are the accepted types of good design all the world over, we are again compelled to choose between the *Nation* and the rest of the world, past and present. The author of the grammar of ornament—Owen Jones—in his axioms, says:

> Flowers, or other natural objects, should not be used as ornament, but conventional representations founded upon them sufficiently suggestive to convey the intended image to the mind, without destroying the unity of the object they are employed to decorate.

Adding:

> *Universally obeyed in the best periods of art, equally violated when art declines.*

The words italicized by Owen Jones himself, somewhat contradict the statement of the *Nation:* "Plant-form, made symmetrical, is an enormity in design."

What the critic's knowledge of drawing is, may be gathered from the following expressions. Speaking of a geometrical drawing of the capital of a column, he says:

> A plan-elevation of a thing being unnatural and intended to serve, etc.
>
> The true form of a capital cannot be expressed, unless it be given in full perspective.

It may be interesting to the unprofessional reader to learn that the words plan and elevation are invariably applied by draughtsmen to two different views of an object, which two views it is impossible to make into one and call it a *plan-elevation*—a term expressing an impossibility, and, therefore, likely to be, in the

critic's interesting words, "an unnatural thing." Also, it may be well for the reader to know that the *true* form of a capital never can be given in perspective which represents the *apparent* form only, and not the true form, though the distinction is clearly unknown to the critic of the *Nation*.

We submit that two flagrant blunders about the simplest principles of drawing, so well known as these, prove the critic to be incompetent, through want of knowledge, to discuss the question of drawing, and by his own language we detect that his ignorance of the subject is the explanation of views as contrary to all accepted authority as they are to common sense.

The only drawing praised in the criticism is a stump-drawing from the cast, having its high lights indicated in white chalk. This is described as "having the lights touched in with true feeling." With the heliotype before us as we write, we unhesitatingly assert that the only bad feature in this drawing is the coarse and vulgar way in which the lights are plastered on, just, in fact, as a school-boy *would* apply them, so that this unfortunate critic has succeeded in praising the one bad character in the work; and it would be just as descriptive to speak of a man gently tickling another's skull with a sledgehammer, as saying those lights are touched in with true feeling.

It is somewhat amusing to observe in manner of writing, by one so ignorant of his subject as the critic, such passages as these: "Let it be known that a cast from nature is a dead thing," and "a cast from nature like this (a group of apples and foliage) is wholly unfit to be used as a model."

Moses, in proclaiming the law, gave his authority for it by saying: "Thus saith the Lord." We are not so considerately treated as the ancient Jews were in this respect, for our lawgiver thinks it sufficient to preface his artistic decalogue by saying: "Let it be known," etc., etc. Meanwhile, we venture to assert that there is not an art-school of any reputation, either on this continent or in Europe, where casts from nature of foliage, fruits, or the human figure do not form a most valued part of the subjects of study. So, here again we have the practice of the best artists and best schools in complete antagonism with the critic, and must decide which of the two we can more safely trust.

It is not pleasant to have thus to expose the ignorance of one who writes in a paper, usually well informed, and the first criticism would have been unnoticed by us, but that in the second criticism the writer re-asserts all the fallacies contained in the first, with an air of majestic omniscience, which is very amusing. We could have charitably supposed that some carping and superficial observer had made use of the pages of the *Nation* to ventilate his grievance against a system of drawing, which had, perhaps, ignored his special talent; but the second criticism proves to us that this cannot be the explanation. The attack made on an honest effort in Massachusetts to popularize the elements of industrial art in the public schools, whilst at the same time no word of hope is given to us that something better in the same way can be found elsewhere,

and the writer encourages us to believe in his knowledge, by such terms as *plan-elevation* (equivalent to saying, a white black, or a hot *frost*), can only be described by the two words—audacious ignorance.

Without being partisans of any particular specifics in teaching drawing, we can only come to one conclusion about what is being done in Massachusetts. It is nothing new; wherever drawing has been well taught, it has been taught in the same way, whether by Durer and Leonardo, or by the Boston teachers to-day, and will have so to be taught as long as the simple is easier than the complex, and the regular is simpler than the irregular. Talking about "æsthetic culture with a moral element," as something which is to be substituted for teaching elementary drawing to young school-children, is simply visionary nonsense. We do not suppose that educators will be misled by the musical tinkling of such phrases, which represent nothing at all but what the Scriptures called "sounding brass," and we do not propose to allow others to be confused about the matter by incompetent critics, wherever their lucubrations may appear.

If the *Nation* will give us the name of competent authorities who endorse such stuff as its pages have contained about this subject of industrial or fine-art education, we will promise to consult them thoroughly; or, if it can point to any place where better results have been produced by ignoring the element of science in art, than have arisen from acknowledging it, and where schools are being taught on the "æsthetic-culture-alone" basis, we will promise to visit the schools and study their productions. It is an absurd fallacy to suppose that children can be taught by appeals to their sentiment and imagination only, nor would the processes of the studio in which adults are educated be equally practical in the school-room where children are taught. We do not want to teach fine art in the schools, but drawing as a means of expression, and as the servant of industry.

The *Nation's* critic will find that cheap sentimentalizing over Turner, from a Ruskinite standpoint will not compensate for professional and practical ignorance of the subject he writes about. We have seen, in our own day, that drawing can be taught intelligently to all children in the way that writing is taught; and applying this belief to the natural faculties of all, the most inartistic country in Europe has become one of the wealthiest industrially, and by a system of teaching such as the State of Massachusetts has adopted.

The best service a competent critic could perform to the public would be to point out where, in some other country, the same need of improvement in public taste had been felt as was felt in England, and a system of teaching which differs from the Massachusetts system, such, in fact, as the *Nation* would approve of, had been equally successful in improving public taste. If it exists, let the *Nation* name where it exists, and thus demonstrate that the critic had something better than the "baseless fabric of a vision" to found his remarks upon. If this be impossible, we shall be ready to furnish some startling in-

stance where this *æsthetic culture* of small children and of adults who were beginners in drawing has been tried only to be abandoned as a "complete failure" by those who allowed the experiment to be tried. We do not expect such service from the *Nation's* critic, because he has established his own ignorance of the best experience and of drawing itself as we have demonstrated. But, if it can be done by others, we are as ready and willing to see it performed as we have now felt it to be our duty to expose the fallacies which have formed the basis of the *Nation's* first attempt to criticise so important a subject.

TEACHERS' SALARIES.

The times are not without the spectacle, at this season of the year, wherein our legislators figure prominently as the champions of reform and economy in the interest of their constituents, the taxpayers. At such times, they, the legislators aforesaid, inspired by the best of motives, resolve themselves into one immense juggernaut, and woe betide the individual interests that interpose themselves along the victorious pathway of its remorseless march. Nevertheless, it often happens that what amounts to a Brobdignagian effort is followed by a most insignificant and Lilliputian result. Room there is, sure enough, for a wise and equitable retrenchment on every hand in the public service, particularly (for private interests will take care of themselves), as for instance, where three men are to be found battening at the public expense, whose combined daily labor may be easily performed by a single industrious man, or where the rate of compensation exceeds twofold that for which similar service is readily obtainable by merchants and business men generally. Then there is the army of political retainers, who do little work, and who are without a single virtue to warrant or justify their preference over thousands of hard-working laborers, now idle on every hand for want of employment.

We have reason to know that a general reduction in the salaries of all classes of public employés will shortly engage the attention of our public men in Albany, and, in the main, the subject is one which will undoubtedly lead to important changes in this respect, and we allude to it now, because we are sure that the lurking devil of suggestion, whom no ordinary power will serve to exorcise, will, for certain reasons, drag into the consideration the question of the pay of teachers. It may be that a proper regard for the public interests, with no view to do injustice to a deserving class, whose misfortune lies in the fact, mainly, that they are public, and not private employés, will favor such a reduction. Over this we or the teachers can exercise but little control, but we have this to suggest, in behalf of a profession which should command inherently as much respect as that of the minister, the lawyer, or the physician, that the first thing to discover is the need of the person for the position, and the ability required to perform the duties of that position. This being done, the best judgment as to the duties and the relative value of the services to the public, as compared to the same ability and service in private affairs, should be brought to bear

upon the subject. The fact is plain, that we cannot adjust the salaries of persons in public positions at any less rates than the payments requisite to secure the ability needed to the thorough performance of the duties in hand. It would be anything but wise to make such a reduction in the rate of compensation of those occupying important positions, as to drive out all who possess real ability and that experience which renders their services desirable, and such as it would be true economy to retain. Upon this rock the teachers should take their stand, and by precept and example seek to establish a standard and to evolve an inexorable law, that no one without proper qualifications shall enter a profession intrinsically honorable and responsible as it is in the abstract, but which, without that law of conservation, must consent to be tried by the lower and utilitarian standard growing out of the now too-prevalent influences of an extraneous and often ignoble character.

HIGHER EDUCATION.

Whether or no the community will continue to maintain its present relations with some of our higher public educational institutions, is a question, which, in the nature of things, it must in a large measure, determine itself. It is evident, however, that sooner or later the touch-stone of economy will be made the test of their relative value—that is to say, whether these institutions do as much for the money as could be obtained elsewhere, and, what is more important still, whether better results could not be obtained for a good deal less money by other arrangements. That, at least, is a phase which has been presented to us, and one which we look upon as of grave importance. Aside from the consideration of this immediate question, it would seem that collegiate education in America is but measurably successful, and its failure is largely due to the fact that there are too many colleges, too much competition, too much superficial work.

Non nostrum inter vos tantas componere lites.

THE "COURSE OF STUDY" IN PUBLIC SCHOOLS.

The New York and Brooklyn Boards of Education have co-incidentally ordered, through appropriate committees, an inquiry as to the existing course of study pursued in the schools under their charge, the feeling being very general that the requirements of the several grades are beyond the attainments of the average pupil. The consistent proportions of existing courses of study have been very much impaired or destroyed by the gradual accretions from time to time, small and perhaps trifling of themselves, but which have tended rather to encumber and retard the progress of the pupil than to facilitate it and enlarge the scope of attainable knowledge. While the enquiry is a proper and timely one, we believe it will be found, to the surprise of many intelligent gentlemen, that much good can be accomplished by very simple re-adjustments of the present courses of study. Radical change in any important element of school management should be considered with caution; and while, therefore, it may be

true, and doubtless is, that in some directions there is unhealthy crowding of some studies, and necessarily much superficial work, it will not follow that everything must be. abolished beyond the now traditionally-sentimental three R's; while to eliminate everything which has served to give to very many children the benefits of a little general knowledge, even of the most elementary type, would scarcely be wise. This point, we do think, however, will become apparent, on investigation: that more thorough elementary work can be done in the primary departments, and this in itself, if brought about, will tend to relieve much of the stress and deficiency complained of elsewhere.

COMPULSORY EDUCATION.

Unless some effort is made to render practical and reasonable this law, absurd as it now stands, the sooner it is eliminated from the statute books of the State of New York, the better. The traditional feats of the ostrich, in his attempt to hide himself from his pursuers, are as nothing compared to the efforts with which we try to delude ourselves, that the compulsory law has really amounted to something. As we have before remarked, this law is modeled after the English one, which has already been amended by act of Parliament, while a fatal error is made in not giving serious consideration to difference in the conditions of the two countries, and the relations to law of this character. Compulsory education, in the nature of things, cannot but prove irksome, offensive and unjust, and especially will it be so, unless this law be re-modeled. An efficient truant law is what is needed in all large cities, and this will answer in most cases to keep all the children at school that it is possible to provide accommodation for. In England, we remember to have seen instances of almost heart-rending cruelty in the attempted enforcement of this law, and, so apparent was its unjustice and inconsistency, that in some cases the judges before whom they were cited refused practically to administer it.

OUR SCHOOLS AT THE CENTENNIAL.—We should like to see the New York and Brooklyn schools represented at the Centennial to the extent of an exhibition, by photographs, of several of the best school buildings, with accompanying plans, showing their internal arrangements. These could be accompanied with a concise account of methods and systems in vogue, together with such statistics as are likely to prove interesting to foreigners, who we are sure will be disposed to examine, with a great deal of care, everything pertaining to the schools of this country.

SAEPE stilum vertas, iterum quae digna legi sint Scripturus.

SCIENTIFIC MISCELLANY.

PART IV of the annual address of Sir John Hawkshaw, C. E., F. R. S., before the British Association—1875:

(From Nature.)

"Among the many names connected with the early progress in the construction of steamboats, perhaps none is more worthy of remembrance than that of Patrick Miller, who, with the assistance of Symington, an engineer, and Taylor, who was his children's tutor, constructed a small steamboat. Shortly afterwards, Lord Dundas, who saw the value of the application of steam for the propulsion of boats, had the first really practical steamboat constructed with a view to using it on the Forth and Clyde Canal. The proprietors, however, objected, and the boat lay idle. Again another attempt to make practical use of the steamboat failed through the death of the Duke of Bridgewater, who, with his characteristic foresight, had seen the value of steam as a motive power for boats, and had determined to introduce steamboats on the canal which bears his name.

"The increase in the number of steamboats since the time when the *Sirius* first crossed the Atlantic has been very great. Whereas, in 1814 the United Kingdom only possessed two steam vessels, of together 456 tons burden, in 1872 there were on the register of the United Kingdom 3662 steam vessels, of which the registered tonnage amounted to over a million and a half of tons, or to nearly half the whole steam tonnage of the world, which did not at that time greatly exceed three million tons.

"As the number of steamboats has largely increased, so also gradually has their size increased, until it culminated in the hands of Brunel, in the *Great Eastern*.

"A triumph of engineering skill in ship-building, the *Great Eastern* has not been commercially so successful. In this, as in many other engineering problems, the question is not how large a thing can be made, but how large, having regard to other circumstances, it is proper at the time to make it.

"If, as regards the dimensions of steamboats, we have at present somewhat overstepped the limits in the *Great Eastern*, much still remains to be done in perfecting the form of vessels, whether propelled by steam or

driven by the force of the wind. A distinguished member of this Association—Mr. Froude—has now for some years devoted himself to investigations carried on with a view to ascertain the form of vessel which will offer the least resistance to the water through which it must pass. So many of us in these days are called upon to make journeys by sea as well as by land, that we can well appreciate the value of Mr. Froude's labors, so far as they tend to curtail the time which we must spend on our ocean journeys; and we should feel grateful to him if from another branch of his investigations, which relates to the rolling of ships, it should result that the movement in passenger vessels could be reduced. A gallant attempt in this direction has lately been made by Mr. Bessemer; whether a successful one, yet remains to be proved. In any event, he and those who have acted with him deserve our praise for an experiment which must add to our knowledge.

"It is a question of vital importance to the steamboat that the consumption of fuel should be reduced to the smallest possible amount, inasmuch as each ton of fuel excludes a ton of cargo.

"As improvements in the form of the hull are effected, less power—that is, less fuel—will be required to propel the vessel through the water for a given distance. Great as have been the improvements effected in marine engines to this end, much still remains to be done. Wolf's compound engine, so long overlooked, is, with some improvements, being at last applied. Whereas, the consumption of fuel in such vessels as the *Himalaya* used to be from 5 to 6 lbs. of fuel per effective horse-power, it has been reduced, by working steam more expansively in vessels of a later date, to 2 lbs. Yet, comparing this with the total amount of energy of 2 lbs. of coal, it will be found that not a tenth part of the power is obtained which that amount of coal would theoretically call into action.*

"We live in an age when great discoveries are made, and when they are speedily taken advantage of if they are likely to be of service to mankind.

"In former times, man's inventions were frequently in advance of the age, and they were laid aside to await a happier era. There were in those earlier days too few persons who cared to, or who could, avail themselves of the proffered boon, and there was no sufficient accumulation of wealth to justify its being appropriated to schemes which are always in their early stage more or less speculative.

"There is no more remarkable instance of the rapid utilization of what was in the first instance regarded

---

* Theoretical Energy of 1 lb. of Coal:

The proportions of heat expended in generating saturated steam at 212° Fahr., and at 14.7 lbs. per square inch, from water at 212° are:

	Units of heat.	*Mechanical equivalent in foot lbs.*
I. In the formation of steam.....	892.8	689,242
II. In resisting the incumbent pressure of 14.7 lbs. per square inch,	72.3	55,815
	965.1	745,057

One pound of Welsh coal will theoretically evaporate 15 lbs. of water at 212° to steam at 212°. Therefore, the full theoretical value of the combustion of 2 lbs. of Welsh coal is:

$2 \times 15 \times 745{,}057$ foot pounds,

or,

$\frac{2 \times 15 \times 745{,}057}{60 \times 33{,}000}$ horse-power, if consumed in 1 hour.

$= 11.2$ horse-power.

As the consumption of coal per effective horse-power in a marine engine is 2 lbs., the power obtained is to the whole theoretical power as 1 is to 11.

by most men as a mere scientific idea, than the adoption and extension of the electric telegraph.

"Those who read Odier's letter, written in 1773, in which he made known his idea of a telegraph which would enable the inhabitants of Europe to converse with the Emperor of Mogul, little thought that in less than a century a conversation between persons at points so far distant would be possible. Still less did those who saw in the following year messages sent from one room to another by Lesage in the presence of Friedrich of Prussia, realize that they had before them the germ of one of the most extraordinary inventions among the many that will render this century famous.

"I should weary you were I to follow the steps by which the electric telegraph of to-day was brought to its present state of efficiency. In the present century, few years have elapsed without new workers appearing in the field; some whose object was to utilize the new-found power for the benefit of mankind, others—and their work was not the least important in the end—whose object was to investigate magnetism and electrical phenomena as presenting scientific problems still unsolved. Galvani, Volta, Oersted, Arago, Sturgeon, and Faraday, by their labors, helped to make known the elements which rendered it possible to construct the electric telegraph. With the battery, the electric coil, and the electro-magnet, the elements were complete, and it only remained for Sir Charles Wheatstone and others to combine them in a useful and practically valuable form. The inventions of Alexander, Steinheil, and those of similar nature to that of Sir Charles Wheatstone, were made known at a later date in the same year, which will ever be memorable in the annals of telegraphy.*

"The first useful telegraph was constructed upon the Blackwall Railway in 1838, Messrs. Wheatstone's and Cooke's instruments being employed. From that time to this, the progress of the electric telegraph has been so rapid, that at the present time, including land lines and submarine cables, there are in use in different parts of the world not less than 400,000 miles of telegraph.

"Among the numerous inventions of late years, the automatic telegraph of Mr. Alexander Bain, of Dr. Werner Siemens, and of Sir Charles Wheatstone, are especially worthy of notice. Mr. Bain's machine is chiefly used in the United States, that of Dr. Werner Siemens in Germany. In this country the machine invented by Sir Charles Wheatstone, to whom telegraphy owes so much, is chiefly employed. By this machine, after the message has been punched out in a paper ribbon by one machine by a system analogous to the dot and dash of Morse, the sequence of the currents requisite to transmit the message along the wire is automatically determined in a second machine by this perforated ribbon. The second operation is analogous to that by which in Jacquard's loom the motions of the threads requisite to produce the pattern is determined by perforated cards. By Wheatstone's

* Dates of patents: Wheatstone, March 1st, 1837; Alexander, April 22d, 1837; Steinheil, July 1st, 1837; Morse, October, 1837.

machine, errors inseparable from manual labor are avoided; and what is even of more importance in a commercial point of view, the time during which the wire is occupied in the transmission of a message is considerably diminished.

"By the application of these automatic systems of telegraphy, the speed of transmission has been wonderfully accelerated, being equal to 200 words a minute—that is, faster than a shorthand writer can transcribe; and, in fact, words can now be passed along the wires of land lines with a velocity greater than can be dealt with by the human agency at either end.

"Owing partly to the retarding effects of induction and other causes, the speed of transmission by long submarine cables is much smaller. With the cable of 1858, only 2½ words per minute were got through. The average with the Atlantic cable, Dr. C. W. Siemens informs me, is now seventeen words, but twenty-four words per minute can be read.

"One of the most striking phenomena in telegraphy, is that known as the duplex system, which enables messages to be sent from each end of the same wire at the same time. The simultaneous transmission from both ends of a wire was proposed in the early days of telegraphy, but, owing to imperfect insulation, was not then found to be practicable; but since then, telegraphic wires have been better insulated, and the system is now becoming of great utility, as it nearly doubles the capacity for work of every wire.

"And yet, within how short a period of time has all the wonderful progress in telegraphy been achieved! How incredulous the world a few years ago would have been if then told of the marvels which in so short a space of time were to be accomplished by its agency!

"It is not long ago—1823—that Mr. (now Sir Francis) Ronald, one of the early pioneers in this field of science, published a description of an electric telegraph. He communicated his views to Lord Melville, and that nobleman was obliging enough to reply that the subject should be inquired into; but before the nature of Sir Francis Ronald's suggestions could be known, except to a few, that gentleman received a reply from Mr. Barrow, 'that telegraphs of any kind were then wholly unnecessary, and that no other than the one then in use would be adopted;' the one then in use being the old semaphore, which, crowning the tops of hills between London and Portsmouth, seemed perfection to the Admiralty of that day.

"I am acquainted with some one who, when the first Transatlantic cable was proposed, contributed towards that undertaking with the consciousness that it was only an experiment, and that subscribing to it was much the same thing as throwing their money into the sea. Much of this cable was lost in the first attempt to lay it; but its promoters, nothing daunted, made 900 miles more cable, and finally laid it successfully in the following year—1858.

"The telegraphic system of the world comprises almost a complete girdle round the earth; and it is probable that the missing link will be supplied by a cable between San Fran-

cisco in California and Yokohoma in Japan.

"How resolute and courageous those who engaged in submarine telegraphy have been will appear from the fact that, though we have now 50,000 miles in cable use, to get at this result, nearly 70,000 miles were constructed and laid. This large percentage of failure, in the opinion of Dr. G. W. Siemens (to whom I am much indebted for information on this subject), was partly due to the late introduction of testing a cable under water before it is laid, and to the use of too light iron shafting.

"Of immense importance, in connection with the subsequent extension of submarine cables, have been the discoveries of Ohm and Sir William Thomson, and the knowledge obtained that the resistance in wire of homogeneous metal is directly proportional to the length, so that the place of a fault in a cable of many thousand miles in length can be ascertained with so much precision as to enable you to go at once to repair it, although the damaged cable may lie in some thousands of fathoms of water.

"Of railways, the progress has been enormous, but I do not know that in a scientific point of view a railway is so marvelous in its character as the electric telegraph. The results, however, of the construction and use of railways are more extensive and wide-spread, and their utility and convenience brought home to a larger portion of mankind. It has come to pass, therefore, that the name of George Stephenson has been placed second only to that of James Watt; and as men are and will be estimated by the advantages which their labors confer on mankind, he will remain in that niche, unless, indeed, some greater luminary should arise to outshine him. The merit of George Stephenson consisted, among other things, in this, that he saw more clearly than any other engineer at his time the sort of thing that the world wanted, and that he persevered in, despite of learned objectors, with the firm conviction that he was right and they were wrong, and that there was within himself the power to demonstrate the accuracy of his convictions.

"Railways are a subject on which I may (I hope without tiring you) speak somewhat more at length. The British Association is peripatetic, and, without railways, its meetings, if held at all, would, I fear, be greatly reduced in numbers. Moreover, you have all an interest in them: you all demand to be carried safely, and you insist on being carried fast. Besides, everybody understands, or thinks he understands, a railway, and therefore I shall be speaking on a subject common to all of us, and shall possibly only put before you ideas which others, as well as myself, have already entertained.

"We who live in these days of roads and railways, and can move with a fair degree of comfort, speed and safety, almost where we will, can scarcely realize the state of England two centuries ago, when the years of opposition which preceded the era of coaches began; when, as in 1662, there were but six stages in all England, and John Crossdell, of the Charterhouse, thought there were six too many; when Sir Henry Herbert, a member of the House of Commons,

could say, 'If a man were to propose to carry us regularly to Edinburgh in coaches in seven days, and bring us back in seven more, should we not vote him to Bedlam?'

"In spite of short-sighted opposition, coaches made their way; but it was not until a century later, in 1784 —and then I believe it was in this city of Bristol—that coaches were first established for the conveyance of mails. Those here who have experienced, as I have, what the discomforts were of long journeys inside the old coaches, will agree with me that they were very great; and I believe, if returns could be obtained of the accidents which happened to coaches, it would be found that many more people were injured and killed in proportion to the number that traveled by that mode than by the railways of to-day.

"No sooner had our ancestors settled down with what comfort was possible in their coaches, well satisfied that twelve miles an hour was the maximum speed to be obtained or that was desirable, than they were told that steam conveyance on iron railways would supersede their 'present pitiful' methods of conveyance. Such was the opinion of Thomas Gray, the first promoter of railways, who published his work on a general iron railway in 1819. Gray was looked on as little better than a madman.

"'When Gray first proposed his great scheme to the public,' said Chevalier Wilson, in a letter to Sir Robert Peel in 1845, 'people were disposed to treat it as an effusion of insanity.' I shall not enter on a history of the struggles which preceded the opening of the first railway. They were brought to a successful issue by the determination of a few able and far-seeing men. The names of Thomas Gray and Joseph Sandars, of William James and Edward Pease, should always be remembered in connection with the early history of railways, for it was they who first made the nation familiar with the idea. There is no fear that the name of Stephenson will be forgotten, whose practical genius made the realization of the idea possible.

"The Stockton and Darlington railway was opened in 1825, the Liverpool and Manchester railway in 1830, and in the short time which has since elapsed, railways have been extended to every quarter of the globe. No nation possessing wealth and population can afford to be without them; and though at present in different countries there is in the aggregate about 160,000 miles of railway, it is certain that, in the course of a very few years, this quantity, large as it is, will be very greatly exceeded."

(Continued.)

In a work entitled "Milk in Health and Disease," just published, the following passage occurs, which we commend to the attention of those who drink the milk of cows kept in the cities and suburbs of New York and Brooklyn: "The milk derived from the cow fed with sewage-grass went putrid and stank after thirty-six hours. The butter from sewage-grass fed milk became rapidly rancid compared with milk from cows fed on ordinary meadow-grass. The cream from ordinary grass required 35 minutes, 1½ hours, and ¾ hour to

churn, and the butter was firm. That from sewage-grass required 1½ hours, 2½ hours, and the butter was soft and yeasty. These experiments were repeated with the milk from the same individual cows, and with other cows, but the results obtained were practically the same." The author also finds that hay made from sewage-grass, when kept in a vessel of water in a warm place, sent up in a few days putrid fermentation, whilst ordinary grass treated similarly did not. This agrees with the statement of Lefeldt that he had found unassimilated sewage-matters (Kloaken-stoffe) in the stems of grass from sewage-irrigation farms, and with our own observation that fish from rivers contaminated with sewage, *e. g.*, certain parts of the Thames above London, pass into putrefaction with exceptional rapidity.

SHAPE OF HANDS.—Hands have been divided into three sorts; the first sort having fingers with pointed tops; the second, fingers with square tops; the third, fingers with spade-shaped tops. By "spade-shape" is meant fingers that are thick at the end, having a little pad of flesh at each side of the nail. The first type of fingers belongs, it is alleged, to characters possessed of rapid insight into things—to extra sensitive people; to thoughtful people; to the impulsive; and to all poets and artists in whom ideality is a prominent trait. The second type belongs to scientific people—to sensible, self-contained characters. The third type pertains to those whose instincts are material; to the people who have a genius for commerce, and a high appreciation of everything that tends to bodily ease and comfort; also to people of great activity. No matter how the hand is shaped, each finger has a joint representing each of these. Thus the division of the finger which is nearest the palm stands for the body (and corresponds with the spade-shaped type), the middle division represents mind (the square-topped), the top, soul (the pointed). If the top joint of the finger be long, it denotes a character with much imagination or ideality. The middle part of the finger, if large, promises a logical, calculating mind—a common-sense person. The remaining joint, if long and thick, denotes a nature that clings more to the luxuries than the refinements of life—one which appreciates the fleshpots of Egypt.—*London Times.*

IT would appear that women have always had a legal right to obtain a diploma from the Royal College of Surgeons authorizing them to practice in midwifery. The College has been advised that a clause in its charter was expressly drawn to admit women, the word "persons" being employed instead of "men," and according to the *British Medical Journal*, the Council has decided on submission. This is a mere step towards the acknowledgment of a right, but it is a long one, as it places women among recognized medical practitioners, with whom surgeons must consult.—*Spectator.*

TO CLEAN LOOKING-GLASSES.—Take a newspaper, fold it small, dip it in a basin of cold water. When thoroughly wet, squeeze it out as you would a

sponge; then rub it over the surface of the glass, taking care that it is not so wet as to run down in streams; in fact, the paper must only be completely moistened, or dampened all through. Let it rest a few minutes, then go over the glass with a fresh newspaper, till it looks clear and bright. The insides of windows may be cleaned in the same way, also spectacle glasses, lamp glasses, etc. White paper that has not been printed on is better; but in the absence of that, a very old newspaper, on which the ink has become thoroughly dried, should be used. Writing paper will not answer.

WHAT IS CALLED petrifaction of a solid of organic origin comprises two distinct epochs when it is complete—that is to say, when nothing more of an organic nature remains in the petrified solid. The first complete epoch comprehends the total occupation of all the interstices, all the pores of the solid by matter dissolved in a liquid. The second epoch comprehends the duration of the total disappearance of the organic matter itself, and its replacement by an inorganic matter which has penetrated it in a liquid state. It is this latter matter which represents the form of the organic matter.

THE famous plain of Marathon has been drained with complete success, and it is likely that this will effect a modification in the topography of Attica. In effect, the existence of the marsh explains the defeat of the Persian army by one ten times less numerous. The Persians, encumbered with forces which could only hinder one another during the action, were helpless when victory was declared for the Athenians. Between the sea and the marsh they were completely blocked in, and the retreat soon transformed itself into a total and bloody rout. 1,500 hectares of good land have been gained by the drainage, and the inhabitants will be saved from the fevers that hitherto have periodically attacked them.

IN a recent French work, in a note on guano, we read that the accumulations of guano on the Chincha Islands are generally considered as composed of the excrements of sea-fowl. In reality, they consist of two portions, differing both in the manner and the epoch of their origin. The upper layer, much the less considerable, is formed of the excrements and dead bodies of birds and of seals, which at present inhabit the islands in question. The lower bed has been formed in pre-historic ages from the excrements of birds which have fallen to the bottom of the sea, of which they inhabit but a limited portion. The strata thus formed have been subsequently upheaved.

AMOUNT OF WATER EVAPORATING IN THE OPEN AIR.—The amount of evaporation at different seasons of the year depends primarily on the temperature, but in an inferior degree on the amount of atmospheric moisture.

Art Miscellany.

INDUSTRIAL ART EDUCATION AND DRAWING IN THE PUBLIC SCHOOLS.

MARY J. DYER, BROOKLYN, N. Y.

Within the last few years there has grown up in this country, a deep and wide-spread interest in industrial art education. Thoughtful minds have come to realize its importance to our industrial and commercial success as a people; and to see also in industrial art an educational element, which to neglect, is to leave undeveloped immense resources of wealth, happiness and prosperity. Although these few thoughtful ones have labored earnestly and successfully toward the establishment of a system of art education whose roots shall be set in the public schools, and which is destined to do as much for us, as a people, as any other general educational good, since the establishment of the public schools themselves; yet there is to-day, in the minds of many, a very vague idea of what it all means. To many, the term "Industrial Drawing" is nothing more than a popular phrase of the day, which sounds very well, but does not mean much any way; and when they read that the Legislatures of Massachusetts, New York, and other States have passed laws *requiring* drawing to be taught in the public schools, or providing for the establishment of free industrial drawing schools, they wonder why these dignified bodies should trouble themselves whether our children learn to draw or not; the idea which they entertain of drawing being the same as that with which they regarded what they used to call drawing when they were young, and went to boarding school—the copying of old castle ruins, or, perhaps, a landscape or a head. But the drawing contemplated by the Legislature and those who have labored in this cause, is quite another thing.

In explaining what industrial drawing is, and in endeavoring to show its importance, and by striving to prove that it is possible to do much toward laying the foundation for it in the public schools — indeed, that this foundation is there already begun —I hope to answer to some minds the universal Yankee question — "What's the use?" — a question which, once satisfactorily answered, is sure to engender and secure

sympathetic and practical co-operation.

The term "Industrial Drawing" is a broad and comprehensive one; yet in a general sense it includes all those branches of drawing whereby the taste is educated, and the knowledge and skill of those engaged in industrial pursuits is advanced.

We study the history of other nations to learn what has made them powerful and prosperous. We learn that France for a hundred years has owed her wealth and commercial eminence almost wholly to her technical schools, and to the taste and skill thereby imparted, not only to her working classes, but to her whole people. We know that her manufactured goods are recognized, the world over, as possessing art qualities and elements of beauty far above those of any other country, and consequently they command always a ready market and high price.

We learn that in Germany, although there has been for a long time ample provision in all the larger towns for the special training of art workmen, yet, since the war with France, they have felt more than ever the importance of larger opportunities and better organized effort, and, as Prof. Langl says, "the authorities of the various industrial towns of Prussia were called upon, in a circular issued by the Ministry of Commerce and Industry, to follow the example of France in the organization of drawing and industrial schools; and their attention was directed to the industrial importance of these schools, and to the fact that they form the true basis of the wealth of France."

We learn, also, from good authority that the industrial products of England have advanced fifty per cent. since the Exposition of 1851, and this advance is due largely to the effort which was put forth in favor of industrial art education, when England awoke to the humiliating fact that "in *products involving taste, that which adds so much to market value* she was far below her European rivals, *and above the United States alone.*"

We might multiply cases without number, but are not these enough as hints to the wise of this country, especially if we add that, while we have hardly made a first beginning in industrial art education, and the nations of Europe have already their well-established schools, they are realizing more fully than ever before that "henceforth national supremacy will be determined more and more by industrial supremacy, and are arming their workmen of all kinds and grades with the best weapons that Art and Science can furnish."*

Many are hoping that our Centennial Exhibition will bring to the realizing sense of our people where we stand, compared with other nations, in matters of taste and of art applied to industry. If it can do this, and nothing more, it will have amply paid for all its cost.

But to do all that is necessary for the full development of a system of national art education, will require much time, much wisdom to direct it, and many industrial art schools and museums. The time, we trust, will be short as possible, and it will be short

* Charles Stetson.

in proportion as we have the other requirements. The money will not be wanting when once the people realize its need. The wisdom is harder to find, from the fact that this country has not yet provided the educational means of furnishing it. The art schools and museums, of which we have but a beginning, will in time grow out of the demand which will be created for them, when the elements of drawing have been taught in the right way in our schools, and all our present opportunities have been approved.

Present effort, therefore, should be in large measure directed to the public schools. I have spoken of drawing in relation to industry, and this, although but one phase of drawing in the public schools, is by far the most important. I quote here a statement made from statistics of the State of New York: "It will be seen that agriculture takes only one-quarter of the employed population, while one-third is engaged in manufacturing, mechanical and mining industries. Add to the latter, those engaged in trade and transportation, also in professional and personal service, and you have five-sevenths of the employed population, the larger part of whom find employment, directly or indirectly, through manufactures. Here is a broad field for industrial education. In accordance with the necessities of the case, the Legislature have just enacted a law, requiring industrial drawing to be taught in all the principal public schools of the State." It should be remembered, on reading the above, that the facts are derived from the census of 1870, and that agriculture, in proportion to manufacture, is rapidly decreasing, and *vice versa*. It is universally admitted that education in the public schools should be of such a nature as to give the greatest benefit to the greatest number. Is there any doubt about the benefit to a large majority from the study of drawing, *rightly taught?* One reason why many oppose drawing, is that it is not always rightly taught; that there is in the schools, and among many connected with them, a misapprehension of the aim and scope of this branch, and the manner in which it should be conducted.

I do not believe that drawing should ever be taught merely as an accomplishment. In a purely æsthetic sense it could not be taught in public schools, nor would it be desirable if it could; neither would I make it entirely of that nature which would bear directly upon the different industries and manufactures; but I would treat it as conscientiously as other subjects are treated—as one of practical and educational value. I would teach the elements of all the various branches of drawing in such a manner that the knowledge, skill and improvement of taste, if carried no further, would be a life-long benefit, and, if desired, be the foundation upon which might be built the profession of an artist, architect, engineer, artisan, designer or draughtsman, or would help toward fitting for usefulness in any industrial pursuit.

There are those who oppose drawing, on the ground that the public schools are not the place for professional training. I agree with them,

but I claim that the rudiments of drawing are no more professional than reading and writing; and is it not worth while to make some effort towards improving a condition of things which prompted the following statement from an eminent German — Prof. Virchow — a statement in which many other foreigners concur?

"Allow me to say, gentlemen, that a sincere friend should speak the truth; and, as a sincere friend of America, who has the greatest sympathy for its people, in whose country I have learned, since my short stay of six months, a great deal, and where I hope to learn much more, it is my duty to say to them, in all truth and candor, that their public taste is in the same awful condition as was the public taste of England before their great exhibition of 1851."

Two questions of great importance, which have been much discussed, and to which in the start, the answer seemed doubtful, have already been satisfactorily settled in Massachusetts and elsewhere. The first was whether *all* could learn to draw, regardless of the traditional idea of specific talent. Experience has proved that industrial drawing can be as easily and as generally learned as any other subject, that the proportion of those who excel in drawing is fully equal to the proportion of those who excel in arithmetic or any other study, and that all can learn to draw *well*. The other question was, who should teach it That it can be successfully done by the regular class teachers, instructed and directed by special drawing teachers, no one will doubt, after seeing what has already been done by them; and that they are the proper persons to do their work is generally admitted, even by the majority of their own number; although, upon them comes the additional labors, and they naturally shrink from it at first, yet they soon prefer to teach it, and feel an interest and pride in a subject in which the results show so well for their effort.

Doubtless, the most thorough and expeditious plan for preparing the class teachers for their work, is the one which was adopted in Boston, where normal classes were established, in which the teachers were required to attend until they could pass a satisfactory examination in the various branches of drawing which they were to teach. If something of this kind is not done, a larger corps of special teachers and a longer time will be required to accomplish the same work; and this is a serious disadvantage in public schools, where economy of time and money are continually urged.

The time devoted to drawing, in proportion to other studies, is everywhere very brief, and, to make the most of it, a thorough system is necessary. In order to answer the many and various purposes of this branch, a variety of subjects must be taught, including *free-hand*, *model*, *memory drawing*, *design*, *geometrical* and *perspective drawing*; yet they should be so thoroughly arranged and graded that each class will have just enough, and just the right kind of work to do. Geometrical forms, being more simple than natural forms, and, indeed, the basis of all forms, should be studied first; the youngest children should be made familiar with them on

the blackboard, and by drawing them on their slates; afterward, conventional forms may be drawn from the board, studying the various proportions of their parts, and simple examples of historic ornament may be given; as, for instance, the Greek fret, and the children may be told that the Greeks used to ornament their vases with figures like that two thousand years ago, thus improving their taste by familiarity with good examples, while they are acquiring skill in drawing, and, at the same time, giving them a first lesson in historic styles. At the next lesson, the children should be required to re-produce the figure from memory. Dictation lessons are also an important exercise to secure attention, and to make them more familiar with names of lines and geometric forms. It is also an interesting exercise; as the pupils know if they understand and follow the directions of the teacher, a pretty figure will be developed upon their slates, and they are curious to see what it will be.

Not much can be done in the primary schools in model drawing, but some simple figures like a cone, a cylinder, a cup, or other plain form can be shown to the scholars, and the different parts pointed out, while the teacher draws them on the board, the children following on their slates. As a first step toward designing, some simple and pretty patterns can be made by combining geometric forms, and by arranging lines and simple figures to fill a square, triangle, circle, or any given space. We have seen many pretty drawings made in this way by pupils in primary classes. Indeed, many beautiful ornamental patterns of the ancients were nothing more than a symmetrical arrangement of geometrical forms repeated.

It may seem that I have given a long list of subjects for the little ones; yet by dividing the hour and a half, or two hours a week, allowed for drawing, into five lessons, one for each day, the time will be long enough for them to draw at once without wearying, and one subject may be taught for each lesson; thus, on Monday, may be given a lesson in free-hand drawing from the blackboard; Tuesday should be devoted to reproducing it from memory; Wednesday, a lesson in dictation, etc. It will be found that the subjects are so nearly related—indeed, are but parts of the whole—that one will help another by putting the same truths in a new form, and thereby make them more interesting.

The geometrical forms studied in the primary schools, should be followed in the grammar schools by the study of geometrical drawing. The problems stated by the teacher, and worked on the board, should be worked by the pupils with rule and compass. Free-hand drawing, including dictation, memory drawing, and design, also outline model drawing, should be continued in the grammar schools. The designing in grammar schools should be from plant forms conventionally treated—that is, by taking the general and leading characteristics of form in the flower and leaves to be used in the design, and by following, in a general way, the laws of growth in that arrangement; *not copying*, as in a picture, which is termed "natural treatment," and is

considered bad when applied to ornament.

In the high schools the same subject should be carried on, putting perspective in the place of geometrical drawing, which should be finished in the grammar schools, and adding shading to the outline model drawing. Applied design—design for manufacture, as wall paper, carpets, prints, lace, china, etc.—should also take the place of elementary design.

Annual or semi-annual examinations in drawing, which should be uniform for the same grade in different schools, are also very essential to keep up a uniform and systematic degree of work; the result of these examinations should be reckoned in the general average of scholarship, and influence the promotion of the pupil as in any other study. Intending graduates should be required to prepare sheets of drawings, one of each subject pursued; these sheets to be uniform in size and subject to certain regulations. By these various means, drawing will command a dignity and attention among other studies in the schools to which its value and importance entitle it.

In conclusion, it is but just to add, that the plan of instruction I have here suggested is not alone the result of my own experience in teaching, but in these conclusions I have been largely influenced by my observation of the work in the schools of Massachusetts and elsewhere. I wish it were possible to infuse more of the higher æsthetic character of art into their method; but when we consider the limitation of public-school work, and the exceedingly practical, rather than æsthetic material with which we have to deal, the way of doing so is not clear; and the way never will be found in which the inspiration of art, in its highest sense, can be reduced to rules and formulas; yet without these can any extensive public-school instruction be given?

THE WATER-COLOR EXHIBITION IN NEW YORK.—The annual exhibition of American Society of Painters in Water-Colors, now in progress at the Academy of Design, has been by far the most satisfactory and successful ever made by the Society. Too much praise cannot be awarded to the Hanging Committee, whose arduous work, in view of the fact that so many pictures were accepted, has been judiciously performed.

Samuel Colman, who has been absent in Europe for a number of years, renews his acquaintance with the New York public through some large and very fine specimens, which exhibit all his wonted skill in drawing, composition, detail and color.

Good specimens are there also of Gifford, Tiffany, Magrath, Bellows, Smillie, Nicoll, Smith, Britcher, Wood, Perry, McEntee, Van Elten, Brown, and others, whose names do not now occur to us.

A number of these pictures have been so well thought of that arrangements have been made to exhibit them at the Centennial.

OLD MASTERS AT THE LONDON EXHIBITION.—The feature of the London Exhibition has been the fine collection of old masters, which visitors from all parts of the world, through this means

have been permitted to see for the first time. This part of the collection was made up from loans by the Royal family and by the oldest and most prominent families in England, in whose possession those pictures have been for many years. The English papers speak with just pride of this liberality, by which the public have been permitted to become familiar with good examples of the old masters.

THE Castellani collection of antiquities, now at the British Museum, and purchased in Rome three years ago, turn out to be a very valuable accession to the collections of this great institution. They consist of a number of figures in marble, which are found to be excellent examples of a late school of Greek carving. There are some marble heads in fine condition, vigorous in conception, and interesting for their exhibition of the prevailing characteristics of sculpture of that day. In addition to these marbles there is an unique collection of medallions, jewelry, metal and glass ornaments, all of great interest to students of archæology.

DRAWING AT THE BROOKLYN INSTITUTE.—It is not generally known that this institution has maintained for several years, free of cost to pupils, a drawing school in which instruction is given by competent teachers in free-hand, mechanical, or industrial drawing.

The classes are under the direction of Professor Ferd. L. Boyle, who is, in all respects, one of the most accomplished instructors in art in the country. Prof. Boyle is one of the founders of the National Academy, of whom there are but few surviving.

The people of Brooklyn, it seems to us, do not sufficiently honor institutions of this character.

THE GATES OF ST. PAUL'S.—Posterity may be glad to know that in 1875 the State entrance gates of St. Paul's Cathedral, which were put in place in the year 1710, and through which all the English sovereigns and State functionaries who have come to St. Paul's during the past 150 years have entered, are offered for sale (for a lump sum) for £150—about $900.

THE FRESCOES AT THE PARIS OPERA HOUSE.—These fine paintings are being ruined by the smoke of the innumerable gas-jets which light the opera house, and during a single year have deteriorated to a remarkable degree. Doubt is expressed as to their being restored.

IN consequence of the sale of best pictures in the New York water-color exhibition, the Brooklyn Art Association announce that it will not be possible for them to re-produce the exhibition in their gallery for the benefit of the Brooklynites.

MICHEL ANGELO.—A new and important work on Michel Angelo, which is to contain material never before published, will soon be issued in England.

DURING Christmas week nearly 50,000 persons visited the South Kensington Museum, London.

EDUCATIONAL AND GENERAL MISCELLANY.

GRAY'S ELEGY.—The following beauful stanzas were unaccountably omitted in his elegy by Gray, who, it is known, was painfully over-fastidious in respect to his compositions:

Hark! how the sacred calm that breathes around
Bids every fierce tumultuous passion cease;
In still small accents whispering from the ground
A grateful earnest of eternal peace.

Him have we seen the greenwood side along,
While o'er the heath we hied, our labor done,
Oft as the woodlark piped her farewell song,
With wistful eyes pursue the setting sun.

There scattered oft, the earliest of the year,
By hands unseen are showers of violets found;
The redbreast loves to build and warble there,
And little footsteps lightly print the ground.

BROOKLYN ACADEMIC CLASS EXAMINATIONS.

The following is the result of the semi-annual examinations of the academic class pupils of the Brooklyn schools, as reported by Superintendent Field:

The whole number of candidates for examination was seventy-one. Of these twenty-five received grade B certificates, twenty, grade C, and eighteen, graduation diplomas, and eight failed. There were seven schools represented in the order, as follows: Number 9, seven candidates of whom four received B certificates, two diplomas, and one failed. Num- 13, five candidates, four of whom received B certificates, and one C. Number 15, twenty candidates, seven of whom received B certificates, nine C, and four diplomas. Number 18, seven candidates, of whom one received a C certificate, two, diplomas, and four failed. Number 23, three candidates; one received a B certificate, one a diploma, and one failed. Number 19, eighteen candidates, six of whom received a B, and six diplomas, and one failed. Number 27, there were ten candidates, two of whom received B certificates, three C, three diplomas, and two failed.

THE WOMEN of Minnesota may vote at any election upon any matters affecting the school interests of the State.

The *N. E. Journal* says: "Why should not Massachusetts women have the same privilege?" and we add, "New York women, too?"

NOMS DE PLUME.

The following list contains the *noms de plume*, together with the proper names of notable authors and writers. By its aid, our readers can at any time readily identify a writer whose *nom de plume* only is given :

Adirondack.....L. E. Chittenden
Alderman Rooney.....D. O. C. Townley
Arp Bill.....Chas. H. Smith
Alba.....Alexiua B. White
Agate.....Whitelaw Reid
An American Girl Abroad.....Miss Trafton
Ariel.....S. R. Fisk
Arthur Sketchley.....Geo. Rose
Americus.....Dr. Francis Lieber
Amateur Casual.....James Greenwood
Artemus Ward.....Charles F. Browne
Asa Trenchard.....H. Watterson
Azamal Batuk.....N. L. Thieblin
A. Crowquill.....A. Forrester
Ally Sloper.....Charles H. Ross
Almaviva.....Clement Scott
Anthony Poplar.....Ed. Dublin University Mag.
Anchor.....J. Watts De Peyster
Bibliophile.....S. A. Allibone
Bard, Samuel A.....E. G. Squier
Brick Pomeroy.....Mark M. Pomeroy
Besieged Resident.....H. Labonchere
Boz.....Charles Dickens
Burleigh.....Matthew Hale Smith
Bookworm.....Thos. F. Donnelly
Barrett Walter.....J. A. Scoville
Benedict Cruiser.....G. A. Sala
Barnacle.....A. C. Barnes
Colley Cibber.....James Rees
Competition Wallah.....Trevelyan
Cousin Nourma.....Dr. J. E. Nagle
Carleton.....C. C. Coffin
Carlfried.....C. F. Wingate
Carl Benson.....C. A. Bristed
Cantell A. Bigly.....Geo. W. Peck
Druid.....C. C. Flint
Doesticks. Q. K. Philander, P. B.....Mort'r Thompson
Dow, Junior.....Eldridge Paige
Dunn, Brown.....Rev. Samuel Fiske
Darby, John.....J. E Garretson
Dick Tinto.....F. B. Goodrich
Egyptus.....Dr. Jos. P. Thompson
Eusebius.....Dr. E. D. G Prime
Estelle.....Miss Eliz. Bogert
Eli Perkins.....M. D. Landon
Eugene Pomeroy.....T. F. Donnelly
Eleanor Kirk.....Mrs. Nolly Ames
Felix Merry.....E. A. Duychinck
Fanchon.....Mrs. Laura M. Sandford
Frank Forrester.....Henry W. Herbert
Fanny Fern.....Mrs. James Parton
Father Prout.....Rev. Francis Mahony
Fat Contributor.....A. M. Griswold
Figaro.....H. Clapp, Jr.
Fleeta.....Kate W. Hamilton
Gringo Harry.....Lieut. Henry A. Wise
Gath.....Geo. Alfred Townsend
Grace Greenwood.....Mrs. S. J. C. Lippincott
Gail Hamilton.....Mary N. Dodge
"H. H.".....Helen Hunt
Hans Yorkel.....A. Oakey Hall
Hans Breitman.....Chas. G. Leland
Horns.....G. C. Fisher
Harry Hazell.....Justin Jones
Harry Franco.....Chas. F. Briggs
Historicus.....Vernon Harcourt
Howard Glyndon.....Laura C. Redden
Ik Marvel.....D. G. Mitchell
Irenæus.....Rev. Dr. Prime
January Searle.....Geo. S. Phillips
Jay Charlton.....J. C. Goldsmith
Joshua Coffin.....H. W. Longfellow
Jacob Omnium.....M. J. Higgins
Jennie June.....Mrs. J. C. Croly
John Phenix.....Capt. G. H. Derby, U. S. A.
Josh Billings.....H. W. Shaw
John Paul.....C. H. Webb
Jugg, M. T.....Joe Howard, Jr.
Junius.....Junius H. Browne
Kirke, Edmund.....J. R. Gilmore
Laertes.....Geo. A. Townsend
Laicus.....Rev. Lyman Abbott
Leone Leoni.....J. D. Osborne
Lucy Fountain.....Kate Hilliard
Marian Harland.....Mrs M V. Terhune
Mignonette.....Emily H. Moore
Miss Grundy.....Miss M. A. Sneed
Minnie Myrtle.....Anna L. Johnson
Mrs. Ramsbottom.....Theodore Hook
McArone.....Geo. Arnold
Malakoff.....Dr. Johnson
Major Jack Downing.....Seba Smith
Mrs. Partington.....B. P. Shillaber
Mark Twain.....S. L. Clemens
Mercutio.....Wm. Winter
Miles O'Reilly.....C. G. Halpine
M. Quad.....Chas. B. Lewis
Major Muldoon.....Wm. H. McCartney
Mintwood.....Miss Mary A. E. Wager
Nym Crinkle.....A. C. Wheeler
Oliver Optic.....Wm. T. Adams
Orpheus C. Kerr.....R. H. Newell
Old Bachelor.....Geo. W. Curtis
Olivia.....Mrs. Briggs
Olphar Hamst.....Thomas Ralph
Oliver Yorke.....Ed. Frazer's Mag.
Onslow Yorke.....Hepworth Dixon
Old Cabinet.....R. Watson Gilder
Penholder.....Edward Eggleston
Peleg Arkwright.....D. L. Proudfit
Peter Query.....Martin F. Tupper
Paul Peebles.....Augustus Maverick
K. N. Pepper.....James M. Morris
Pisistratus Brown.....Wm. Blacks
Parsee Merchant.....Mr. J. S. Moore
Petroleum V. Nasby.....D. R. Locke
Porte Crayon.....D. H. Strother
Publicola.....W. J. Fox
Parley.....Major B. P. Moore
Philip Quilibet.....Geo. E. Pond
Paul Creyton.....J. T. Trowbridge
Parson Frank.....F. Jacox
Pylodet, L.....F. Leypoldt
Polinto.....F. B Wilkie
Romeo.....G. W. Fellows
Saxe Holm.....Miss Rush Ellis
Sophie Sparkle.....Jennie E. Hicks
Sylvanus Urban.....Ed. Gentlemen's Mag.
Sophie May.....Miss S. R. Clarke
Silverpen.....Eliza Meteyard
Susan Coolidge.....Miss Woolsey
Sentinel.....Wm. H. Bogart
Shirley Dare.....P. C. Dunning
Savid.....James Davis
Timon, John.....Donald G. Mitchell
Tom Folio.....J. E. Babson
Thomas Maitland.....Robt. Buchanan
Timothy Titcomb.....J. G. Holland
Trusta.....Eliz. Stuart Phelps
U. Donough Outis.....R. G. White
Vieux Moustache.....G. Goron
Veteran Observer.....E. D. Mansfield
Warrington.....W. P. Robinson
Warwick.....F. B. Ottarson
Whyte Blythe, Jr.....Solon Robinson

WRITTEN AFTER READING THE FAIRY TALES.

They may talk as they will, but the fairy times
  Were the pleasantest times of all;
When up from their dwellings a few dark rhymes
  The Genii of earth could call.
Oh! from my heart, how I'd pray and vow,
If rhymes had but half such virtue now.

Where now is the cave like that dark one, damp,
  Where the gold and the silver shone?
And what is the brightest Grecian lamp
  To Aladdin's wonderful one?
And the modern slippers, what are they, alas!
To the godmother Fairy's slippers of glass?

Oh! for the days when the giants were rife,
  With their towers and painted halls;
And heroes, each with a charmed life,
  Rode up to their castle walls,
And knocked with a loud and dreadful clang,
Till the roofs, and the gates, and the wild woods rang.

When the good and the fair, as the wizard wand stirred,
  Were bound in a dreamy spell;
When maiden spoke, and at each sweet word,
  Diamonds and roses fell.
I wonder if any fair lady now
Could open her lips and let diamonds flow?

When gentle and bright ones with golden hair
  Were wooed by princes in green,
And knights, with invisible caps to wear,
  Could see, and yet never be seen.
Are any such knights, in green or blue,
To be met with now?—I wish I knew.

Oh! talk as they will, but the fairy times
  Were the pleasantest times of all;
When up from their dwellings a few dark rhymes
  Genii and spirits could call.
And, oh! how I wish that rhymes again
Had even one-half the power they had then.

THE forcing process in school work, and the want of experience in the use of the reflective faculties, is evidenced by the following illustration, taken from the forthcoming report of Superintendent Field, of Brooklyn:

"While many of the exercises were written with admirable correctness and great taste in the selection of words for expression of the theme, there were still many evidences of that confused notion of the subject and want of clearness of statement which indicates unsystematic study, or want of comprehension of its teachings. Some of these involved, and turbid statements are so grotesque in their confusion, blending incongruous facts with creations of a fervid imagination as to seem the offspring of a nightmare instead of a wakeful and cultivated reason. Thus one of the essays on the circulation of the blood was formed in the following ingenious manner:

"The blood is traversed by minute blood vessels, which passes through the various parts of the body, and is lodged at points called centres of ossification, which takes place in some persons earlier than others. There is a time in our life, about twenty one years of age, when the original skeleton is taken down and one bone built up, and in some the bones are cartilaginous until extreme old age. There is no specified classification of the bones. It is customary to speak of the bones of the leg as long, the cranium flat, and square bones and ankle.

"This class of turgid statements, so whimsically blended as to confirm the belief that the writer had been at a great feast of learning and stolen the 'scraps,' is not an uncommon result of my examinations of candidates for teachers' licenses. A few weeks since, an applicant for license, who had graduated two or three years previously from one of the schools, wrote the following reply to the query—

Name two important battles of the Revolution—of the second war with Great Britain—of the war with Mexico—and the Rebellion—stating which party were victorious.

"Two of the principal battles of the Revolution are Lexington, in which the Union forces were defeated, and Bull Run, which took place July 17, 1776. The two principal battles of the Rebellion, one when Farragut sailed up the Gulf of Mexico and captured Louisiana, and also the battle of Cornwallis. Six battles of the Revolution—battle of Lexington, when the Unions were defeated; first battle of Bull Run, in which the English were victorious; second battle of Bull Run, in which the Americans were victorious; and the battle of Quebec, in which the victorious party was the English."

WE ANNOUNCE with much pleasure that Professor Homer B. Sprague is prepared to give private and class instruction in language, literature and elocution.

Mr. Sprague is so well-known for his scholarly attainments, that it is hardly necessary to speak of his peculiar fitness for this sort of instruction, but as it is so essential to the pupil to study with a master in matters of this sort, that we cannot refrain from commending Prof. Sprague to all who desire instruction and information in these important branches.

Prof. Sprague's address is 84 St. James place, Brooklyn.

MR. KIDDLE, City Superintendent, and Prof. DAVID B. SCOTT, have been requested by the Board of Education to prepare a history of New York public schools, which will not only be of great service to strangers, but useful and interesting, as well, to every one. A part of the work will be devoted to supplying information, usually sought for by visitors, and will be so arranged as to render anything but an occasional inquiry necessary on the part of any one.

AT the last meeting of the Boston School Board of Education, it was confidently expected that John D. Philbrick would be elected City Superintendent of Schools, but William T. Harris, formerly of Boston, but now Superintendent of the St. Louis Schools, developed an unexpected strength, formidable enough to prevent an election.

As a question of fitness, it will be hard to choose between these two gentlemen, and the opposition to Mr. Philbrick is based upon no personal grounds, but rises out of the feeling that the introduction of a new force, with possibly a variation in some of the methods of instruction, will benefit the city.

ACCORDING to a writer in the *St. James Magazine*, it appears that while Napoleon's opinion of Wellington was that he was a good soldier and a brave man, that he did not possess the experience requisite in a field marshal, and that Sir Rowland Hill and General Picton, subordinates of Wellington, were both superior to him in military skill and judgment.

WARFARE OVER GERMAN IN THE PUBLIC SCHOOLS in New York having ended, similar issue is next in order in Brooklyn, where the question, as to whether German should be taught or not in the schools, is now being considered by the Committee on Studies.

T. J. ELLINWOOD is prepared to give instruction in phonography, and will make satisfactory arrangements with any one desiring to prepare themselves as reporters and amanuenses. Mr. Ellinwood's address is 82 St. James place.

WE hear continually a wrong pronunciation of the *Droeshout* portrait of Shakspeare. The word is Dutch, and should be pronounced *Drooz* (like *ooze*), *howt* (like *shout*). *Droes* means a giant; *hout* means wood, timber.

THE Japanese Commission of Education and the Japanese Consul visited the New York Normal College on the 23d inst., and expressed great satisfaction with their visit.

AT the age of twenty-one, A. T. Stewart was a school teacher in the old Mechanic Society School.

SOMEBODY wants to see among the school-books exhibited at the Centennial a copy of Ben. Franklin's Prompter, a New England primer, and Noah Webster's spelling book.

THE next meeting of the Ohio State teachers will be held at Put-in Bay, June 27, 1876, and will continue in session three days.

THE next annual meeting of the American Institute of Instruction, will be held in New Hampshire, on July 11th, 12th, and 13th.

KANSAS has expended $3,989,085 in school-houses, and has a school fund of over $1,000,000, and constantly increasing.

THE Vermont State Normal School has graduated 304 teachers during the nine years of its existence.

THE SCHOOL-ROOM.

[For School Notes and Queries, and Correspondence. Communications and Contributions to this Department will receive prompt attention. We do not, in any manner, hold ourselves responsible for the views of our correspondents, except where we directly assume such responsibility.]

ACADEMIC CLASS EXAMINATION PAPERS.

At the request of a number of teachers and scholars, we publish in this department the examination papers used at the recent semi-annual examination of the academic classes of the Brooklyn schools, which took place in the early part of this month.

The papers are similar in all respects to those used by Supt. Field, and are published with his approval.

[The figures accompanying the head of each study represent the value of each paper.—ED.]

GRAMMAR.—(60.)

Parse the words in *Italics*, omitting the declensions and conjugations.

Fie on that physic heals *but to destroy*.
T'was like one of my gentle Italy, who found
His *enemy* nigh to death with ten wounds, for
That arch *inquisitor* to enter in,
You *think* he sated vengeance; *made* the ten
a score?
Not such cheap venture for so great a prize.
The dying *wretch* to his own bed he bore.
There, by himself a *month untenanted*,
He nursed him back to life. I'd swear you
think
This Christian dole won him a seat in Paradise.
For that I know not. But of modern piety
He was the hero, *Champion*.
For when his guest (within whose soul *revenge*
And its unholy brood of hates had died)
Would on the morrow, *drunk* with gratitude,
Go forth; that night the pious *host*, his tale
Of festering wrongs *rehearsed*, then stabbed his
guest to death.

ETYMOLOGY.—(60.)

1 Alias.	21 Incantation.	41 Delicious.
2 Alimony.	22 Incipient.	42 Exemption.
3 Amiable.	23 Precipitate.	43 Peremptory
4 Anguish.	24 Carnivorous.	44 Equestrian.
5 Rectangle.	25 Incautious.	45 Extremity.
6 Unanimous.	26 Accession.	46 Fabricate.
7 Terraqueous.	27 Intercede.	47 Facility.
8 Coercion.	28 Celebrity.	48 Fallacious.
9 Armament.	29 Excellent.	49 Fanatic.
10 Artifice.	30 Concentric.	50 Felicitous.
11 Articular.	31 Discriminate.	51 Offence.
12 Auditory.	32 Disconcert.	52 Fervent.
13 Audacity.	33 Certify.	53 Festival.
14 Authorize.	34 Chorus.	54 Perfidy.
15 Debauchee.	35 Precinct.	55 Transfix.
16 Beneficent.	36 Circulate.	56 Indefinite.
17 Casualty.	37 Excitement.	57 Confirm.
18 Fratricide.	38 Citizen.	58 Confiscate.
19 Campaign.	39 Claimant.	59 Conflagration.
20 Incentive.	40 Indecorum.	60 Flambeau.

ARITHMETIC.—(60.)

1 Explain the process for adding fractions of different denominators; dividing a mixed number by a fraction; and for reducing fractions to decimals. (10

2 Explain the process for reducing compound numbers to decimals of a higher denomination having the same value. (5

3 Explain the process for finding the principal when the amount of the principal placed at interest, with the rate per cent., and time are given. (5

4 When several sums are due at different periods, how will you ascertain the equated time for which a note for the whole amount may be given without loss to either party? (5

5 The amount of a note placed at interest for 2 years and 6 months, at 7 per cent, is 2,937 50-100, what was the principal? (5

6 Find the amount due on a note for $6,000, made payable at the end of two years, on which two payments have been made—one at the end of three months for $600, and the other at the end of one year and three months from date of note for $2,000, at 7 per cent. (5

7 From a note discounted at a bank for $1,800 having four months and ten days to run, what sum was received? (5

8 Ascertain, by the rule of proportion, what is the weight of gold bullion produced in the United States in 1875, valued at $54,000,000 when three pounds were found at the Mint to be worth $648.75. (5

9 What is Equation of Payments, and what is the formula for ascertaining the equated time for several payments? (5

10 What is exchange, and what is the formula for ascertaining the value of U. S. currency in Sterling money? (5

11 Find the square root of 9.017.021 75-100. (5

ALGEBRA.—(40.)

1 Define the terms Exponent, Coefficient, Polynomial, and Homogeneous. (4

2 If the product of two quantities be divided by their greatest common divisor, what will the quotient be? (3

3 How may a fraction be reduced to an entire or a mixed number? (2

4 Reduce $4\,b + \frac{b\,x - b}{x}$ to a fractional form. (3

5 Reduce b, $\frac{3\,b}{c}$, d, and 5, to a common denominator. (3

6 Divide $\frac{2\,x^2}{a^3 + x^3}$ by $\frac{x}{a + x}$ (4

7 Given 4 equal lengths. From each of three take 19 yards, and from the fourth take 17 yards. The sum of the remainders was 142 yards. What was each length? (6

8 Two numbers are in such relation that if to the greater is added ⅓ of the less, the sum will be 37; While if from the less there be subtracted ¼ of the greater, the difference will be 20. What are the numbers? (5

9 Explain the Binomial Theorem. (5

10 By the Binomial theorem raise $m + n$ to the fifth power. (5

11 Extract the square root of $x^2 + a\,x + \frac{1}{4}\,a^2$. (3

12 The quotient of a number consisting of two places divided by the product of its digits was 2. By adding 27 to the number its digits will be inverted. What is the number? (8

GEOMETRY.—(30.)

1 Define Isosceles triangle, Trapezium, Trapezoid, Rhombus. (4

2 Define Hypothesis, Corollary, Axiom, Scholium. (4

3 Prove that in any triangle the sum of the three angles is equal to two right angles. (5

4 What is an Inscribed triangle? a Tangent? a Segment? a Chord? (4

5 Prove that an angle at the circumference of a circle is measured by half the arc which subtends it. (3

6 From a given point, without a straight line, let fall a perpendicular upon the line. (3

7 Inscribe a square in a given circle. (2

8 If a line be drawn parallel to the base of a triangle, it will divide the two other sides perpendicularly. (5

MENSURATION.—(60.)

1 What is the process for finding the area of a Right-Angled triangle, and of an Equilateral triangle, when the length of all the sides is given? (5

2 Give the formula for ascertaining the area of any triangle when all the sides are given. (5

3 What is the ratio of the diameter of a Circle to its circumference, and of these dimensions to its area? (4

4 What decimal respresents the ratio of the diameter of a circle to its area? (2

5 How can you find the area of a Rhomboid? (4

6 The diameter of an end of a cylindric column was 2 feet 6 inches, and its length 18 feet, how many cubic feet did it contain? (5

7 The Planet Mars has a diameter of 4,300 miles, what number of square miles in its surface? (5

8 Ascertain the area, in acres, of a Rectangular Parallelogram, one of whose sides is 340 rods, and the diagonal line connecting two opposite angles is 480 rods. (8

9 What mensuration can be ascertained by the decimals .7854—3.1416—.5236. (6

10 The diameter of a Sphere is 24 yards, what is its surface? (3

11 The axes of an Ellipse are 24 yards and 18 yards, what is its area? (3

12 Define the terms Radius, Chord, Tangent, Hypothenuse, Foci. (5

13 How many degrees in each angle of an Equilateral triangle, and how may it be proved that the number named is correct? (5

PHYSIOLOGY.—(60.)

1 Describe the Osseous System of the human body, naming its principal members in their order. (8

2 What is the number of the bones in the human body, and of what substances are they composed? (5

3 Describe the Muscular System, naming the principal muscles in the trunk, arms and legs. (8

4 What is the number of muscles in the human body, and what is their mechanical and chemical composition? (5

5 Describe the Nervous System, naming its principal members. (5

6 What is the function of the nerves, and how may their activity be suspended? (4

7 Describe the Circulatory System. naming the principal organs connected with it. (5

8 How is the blood formed from food, oxygenated, colored and distributed? (5

9 Describe the Digestive System, naming the principal organs. (5

10 Describe the process of food digestion. (4

11 Describe the Respiratory System, naming the principal organs. (5

12 State the chemical components of air, the changes affected on its composition by breathing, and the use of the inspired air in the body. (5

CHEMISTRY.—(60.)

1 What is an Element in Chemistry? and state what is the number of elements, and into what two classes they are divided. (4

2 Define Chemical Affinity, and state the difference between it and Mechanical Mixture. (4

3 What are Binary Compounds, and into what three classes are they divided? (4

4 Describe Salts, Acids, Bases and Neutrals. (4

5 Name the principal Acids, with their symbols. (5

6 Name the principal Alkalies, with their symbols. (5

7 What four principles are involved in the Atomic theory? (4

8 What are the chemical elements of Water and Air? and describe the characteristics of each. (4

9 Describe the chemical changes produced in the air by breathing. (4

10 What are the tests for detecting Acids, Alkalies, Neutrals, and the principal gases? (6

11 Define Rusting, Combustion. Decay, Respiration; and show what relation they bear to each other. (6

12 What four gases principally form, in varying proportions, all organic matter? (4

13 Describe the processes for producing these gases. (4

14 Describe the specific effects of Oxygen, Nitrogen, Carbonic Acid and Chlorine Gas on respiration. (4

NATURAL PHILOSOPHY.—(60.)

1 Where do objects have the greatest weight, and where the least? (3

2 What is Specific Gravity, and how is that of any solid ascertained? (3

3 What are the respective standards of Specific Gravity for Solids, Liquids, and Gases? (3

4 What difference will be found in the velocity of two falling bodies of the same size and shape, but of different weight? (4

5 In what ratio does the force of Gravity increase and decrease? (3

6 How does the atmosphere affect Specific gravity? and give an illustration. (3

7 State the specific gravity of the Precious Metals—of the heaviest and lightest metals. (4

8 How does the weight of the atmosphere vary, and what is its weight when heaviest? (4

9 What is Capillary Attraction, and what laws affect its force? (4

10 Give some familiar illustration of this force. (3

11 Define Hydrostatics and Hydraulics. (2

12 What law governs the pressure of liquids? and explain the Hydraulic Press. (4

13 Describe the Screw of Archimedes, and its use. (3

14 What instruments are constructed upon the theory of the weight of air? (4

15 Describe two of the most important. (4

16 Define Incidence and Reflection, and state the law governing their relation. (3

17 Name the principle mechanical forces. (4

18 What are the relations of Electricity, Galvanism, and Lightning? (4

ASTRONOMY.—(50.)

1 What is the Zodiac—its width, and what relation does it bear to the orbits of the planets? (3

2 Explain Parallax, and state what celestial bodies have sensible parallax. (5

3 What bodies belonging to the Solar System have orbits not confined to the Zodiac? (2

4 What is the transit of a planet? What planets can be observed in transit, and of what use is its observation? (5

5 What is a Constellation? Name some of the principal constellations. (5

6 What is the extent of the atmosphere of the earth, and what is conjectured by Astronomers regarding the space between the planets and the sun? (3

7 What distinction do you make between a planet and a star? (3

8 What is the relative distance of the nearest fixed star and the sun? (2

9 What is the velocity of light, and what length of time is occupied by a ray of light in traversing the space between the earth and sun? (3

10 Over what portion of the earth's surface are the sun's rays vertical? (2

11 What is the effect of the greatest inclination of the sun's rays on the earth's surface? (2

12 What were Kepler's great laws? (5

13 What is the Radius Vector of the earth's orbit? (2

14 Describe Aphelion and Perihelion, Apogee and Perigee. (4

15 What are Nodes, Conjunction and Opposition of planets? (3

16 What is the difference between Inferior and Superior planets? (2

GEOGRAPHY.—(160)

1 Name the States which have their principal source of wealth in each of the following products: Manufactures of Cotton and Wool; Fish and Fish Oil; Commerce with foreign nations; Mining and Manufacturers of Iron; Mining of Gold and Silver; Wheat and Corn; Grazing and Breeding of Cattle; Rosin, and Lumber and Products of the Forest; Cotton; Sugar and Rice. (10

2 Name the town or city most largely deriving its wealth from the trade in, or export of, each of these products. (10

3 What States have been acquired by conquest? (5

4 What States have been acquired by purchase, and what one was added by treaty? (5

5 Name the States having the greatest wealth or population, in the order of their rank in these particulars. (20

6 Name the Capitals of these States in the same order. with the river on which each is situated. (10

7 Names the Cities having a population larger than one hundred thousand, in the order of their size. (10

8 Name the countries of South America, with their Capitals, commencing at the North West, proceeding down the Pacific Coast, and then Northerly along the Atlantic and Caribbean Sea. (20

9 Group the countries of Europe under the following classifications: Empires, Kingdoms, Republics. (10

10 Group the principal countries of Europe under the different religions which prevail in each. (10

11 Name ten of the principal cities of Europe which are Capitals, the river on which each is situated—stating the principal characteristics for which each is noted. (30

12 What countries and principal Islands form the Empire of Great Britain, and what are the principal towns in each? (20

UNITED STATES HISTORY.—(110.)

1 Name the persons eminent for their discoveries in the present territory of the United States, stating what part was discovered or explored by each. (10

2 By what Nationalities was the present territory of the United States settled, and state what portion was settled by each. (10

3 Who were the principal persons concerned in each of these settlements? (10

4 Give the name and date of the earliest settlement made by each nation. (10

5 Name the principal wars in which the Colonies were engaged prior to 1770. (5

6 Name the wars in which the United States have been engaged, in the order of their occurrence, giving the date and cause of each. (15

7 Name the principal battles in each of these wars, stating which party was victorious. (15

8 What Presidents owed their election principally to the eminence of their military services? (6

9 What Presidents died in office, and what Vice-Presidents succeeded them? (6

10 What Presidents held office for two terms? (5

11 Name the persons who rose to eminence during the Revolution who were not engaged in military affairs, stating for what services they were remarkable. (8

12 Name the three naval engagements and five land battles fought in the war of 1812, stating which party was victorious. (5

13 What Presidents were elected because of civil services in the Revolution, and which of them died during their term of office? (6

14 What other persons were celebrated for civil services in the Revolution? (4

GOVERNMENT OF UNITED STATES.—(60.)

1 What is the Constitution of the United States? (3

2 What is the difference between the Laws of the United States and the Constitution? (5

3 How may the Constitution be amended? (3

4 Define the respective powers of the President, the Supreme Court, and of Congress. (5

5 What is the process by which any proposed enactment becomes a law? (4

6 How may the Acts of Congress be nullified by the President, and what is his act of negation called? (3

7 How may this nullifying action of the President be overcome by Congress? (3

8 By what body, and in what other way, may a law of Congress be rendered nugatory, or declared inoperative? (3

9 What are the titles of the offices of the Members of the Cabinet? (8

10 How are all heads of Departments, Judges and Principal Officers of the United States Courts, Officers of the cussoms, Postmasters, and Generals of United States Army elected? (4

11 If Congress should pass laws violating the Constitution, infringing the rights of the States, or depriving citizens of their just privileges, what mode of nullifying their action is provided? (4

12 What rights of citizens are guaranteed by the Constitution? (5

13 How can a citizen of one State maintain a just claim against a citizen of another State? (3

14 Who are defined to be citizens of the United States, and how may aliens become citizens? (4

MODERN HISTORY OF EUROPE.—(60.)

1 What nationalities have contributed to form the present population of England? (5

2 Name the nations of Europe whose language and customs continue to be modified by the Roman conquest, commonly called the Latin Nations. (5

3 From what nationalities was the present population of France composed? (5

4 What modern people represent the Pictic, Celtic, Gaelic, and Cymric or ancient British? (5

5 By what nations has England been conquered and her people subjugated? (4

6 By what nations has France been conquered and her territory occupied? (5

7 What claim had England to a part of the territory of France, and what Monarchs sought to enforce it? (4

8 What great battles were fought to maintain that claim? (5

9 What two Monarchs of France died in English captivity? (2

10 What Monarchs of France were dethroned or driven into exile, died by assassination or by execution; narrating what influence produced each event? (5

11 What Monarchs of England were dethroned, murdered, executed, or perished in battle; stating the cause or event connected with each? (5

12 State in what forms of Government France has existed, and under what noted Rulers. (5

13 What was the Salic law, and what nation was governed by its observance? (2

14 At what period of English history, and under what Ruler, was that jurisdiction styled The Commonwealth? (3

ANCIENT HISTORY.—(60.)

1 What was the Roman Triumvirate; of what persons was it composed; and at what period did it exist? (5

2 Under what forms of Government had Rome existed at the period of the reign of Constantine? (3

3 Under what noted Rulers did each of these three forms terminate? stating the characteristics or events for which each was noted. (3

4 What were the titles of the principal officers of the Republic? (3

5 In whom was the supreme legislative power of the Republic invested? (2

6 Into what orders or classes were the inhabitants of Rome divided? (3

7 For what purpose was the Amphitheatre used? What effect did it have upon the Roman character? (3

8 What Emperors of Rome were engaged in war by which the nationality of the Jews was destroyed? and describe their character. (4

9 What Emperors of Rome are recorded as having been engaged in wars in England? (2

10 What were the Punic wars—their number—and against whom were they waged? (6

11 What remarkable Africans were engaged in war with Rome, and what was their success and fate? (5

12 What was the policy of Fabius in warfare, and what celebrated warrior was that policy exerted against? (4

13 Who was the first Christian and the last Pagan Emperor? (2

14 Give the characters for which Caligula, Domitian, Marcus Antonius and Augustus Cæsar were noted. (5

15 For what were Plutarch, Virgil, Horace, Seneca and Cicero famous? (5

16 For what was Julius Cæsar, Nero, Brutus, Julian and Pompey noted? (5

[THE FOLLOWING, we would premise, are the reflections of a thoughtful Principal upon an important subject. We do not hesitate, however, to endorse all that he says.—ED.]

Drawing lessons are intended to serve two purposes—to teach the art, and to educate the eye to appreciate the beautiful. This second object is frequently overlooked in the natural anxiety, which every teacher feels, to develop skill in the first. Many pupils, especially girls, will slowly, laboriously, and even skilfully, copy an intricate design, while they can see no beauty in the form of a lily, or, indeed, in any flower, unless it is highly colored.

To such pupils, Flaxman's Outline Drawings are not to be compared for beauty with the posters of a minstrel troupe; and the sketches of a Landseer sink into insignificance by the side of the show-bills of a traveling menagery. It is said that a novice fails to see many things which the veteran astronomer easily distinguishes.

Art will never flourish in a country where the mass of the people see neither beauty nor use in it. Hence, we regard it equally important that the eye be trained to see the beautiful, as that the hand shall be trained to produce it; and, indeed, of greater moment, for, while but a few will have the time, talent, and perseverence necessary to produce works worthy of admiration, all may develop the abili-

ty and taste to admire such works. Where the germ of this ability exists, cultivate it. Where it is wanting, create it. To this end induce the pupil to stand on his feet and tell you why he thinks a design beautiful, or a sketch pleasing. Reasons not recognized by Alison will doubtless be assigned, but we all creep before we walk, and under the skilful artisan the rough diamond becomes a dazzling gem. Perhaps you will find it needful to read some standard works on the subject, and, by so doing, kindle such enthusiasm in yourself that you will succeed without further hints.

THIRD GRADE.—"I have a pupil in my class who refuses to apologize for a course of conduct that I think wrong. Shall I make him?" If you mean, shall you use force to secure this end, we say no, emphatically. An apology must be spontaneous, treading swiftly on the heels of the offense or the result of reflection, and a thorough conviction of wrong-doing. In either of these cases, accept it, and bury the transgression. A forced apology is a forced lie. There is a class of teachers whose dignity is constantly being injured, and who usually have one or more victims in the corner, meditating, as they suppose, upon the enormity of their sins, and fast approaching that state of mind which will induce them to apply the apologetic salve to the wounded dignity, when, in fact, they are contriving how, without detection, they may get a pin into the teacher's chair, with its business end up.

If, on the contrary, you mean, shall you place his conduct before him, in such light that he cannot fail to see its wrong, and, when this is fully established, ask him what a gentleman does when he discovers he has done wrong, and so secure an apology, we say, *yes*, with equal emphasis.

"IF men praise your efforts, suspect their judgment; if they censure them, suspect your own."

PHONICS.—We have already, on several occasions, commended the efforts to render pupils, early and thoroughly familiar with the sounds of the letters. We do not see how accuracy of pronunciation or distinctness of articulation can be otherwise obtained. The population of this country is largely composed of foreigners and their children. Nothing will so surely turn their affections to this country as the ability to speak the language in its purity. This ability can only be gained in the schools; and its acquisition is greatly hastened by separating words into their elements.

A majority of a class can be taught to write legibly by imitating the copy; but the majority cannot be perfected, nor a large minority taught to write decently, unless the letters are separated into their elements, and the formation of these accurately acquired. We think the same is true of reading.

But familiarity with the sounds of letters and the modes of representing them enables a pupil to use a dictionary intelligently. Nine-tenths of the pupils in a class, unless instructed, cannot go to a dictionary and ascertain, unassisted, the correct pronunciation of the word, alternately, or of the list of words given in the previous number of THE JOURNAL. What

would be thought of a carpenter who should send out an apprentice, after a term of ten years, unable to use a square intelligently, or to set a window frame without help?

"THERE is one charm which all girls might possess, and which frequently not one in a provincial town does possess; which equally enchants him who has, and him who has it not; which adorns the features and every word, and which remains imperishable (nothing can exist longer) while a woman speaks—I mean accurate pronunciation."—*Jean Paul.*

AN accomplished and experienced lady teacher writes thus:

"It has often been in my mind to say that every school—and why not every class that is sufficiently advanced?—should have a record book and a secretary. In the book should be set down, with more or less detail, whatever occurs in the school, out of the usual routine: the advent of new trustees, the presence of distinguished strangers, the programmes of public exercises, the introduction of new rules or the abrogation of old ones, the time of examinations, and innumerable other things that would suggest themselves when the book is once opened. If it is a class-book, the bright sayings of its different members, and an occasional composition transcribed by its author, a record of the half holidays received, and many other things that go to put life into the class, would fill a volume, eagerly sought by the "old boys" on their return to school, and highly prized by the present members of the class as a diary of those who have traveled the road before them.

At the same time, it would tend to foster that home spirit which is essential to the successful maintenance of a public school. Boys inevitably become men, and have thrust upon them public duties, among which is the care of the schools. Who so fitted for such duty as he who regards his school as a second home? Who will so intelligently and affectionately watch over its welfare as he who has once been happy within its walls? Therefore, teachers, anything that you can do to make your pupils love their school will not be labor in vain. It will be 'bread cast upon the waters, sure to return after many days.'"

WE see that our energetic cotemporary, the *N. E. Journal of Education*, strikes some strong blows against the practice of syllabifying words in oral spelling, to which allusion was made in the January number. We think the uselessness of the practice must be obvious to any one, on a little reflection. To those who are still inconvinced, we recommend the perusal of the recent numbers of our contemporary.

A PARENT writes, "Please to follow up your attack upon the miserable habit that many teachers possess, of addressing their pupils only by their surnames. This practice which is reprehensible when applied to boys, is abominable when little girls are thus addressed. Respect for age and station is a plant of slow growth; this habit bids fair to root it out altogether. Among the many excellent things of the schools of olden times,

was the custom, in which all were easily drilled, to put handles to the names of older folks. The present generation seem to have lost this habit, if they ever had it. Therefore, Mr. Editor, do what you can to regain it."

All of which we heartily commend to the attention of teachers, and ask them to make the attempt to drop a habit that has nothing to recommend it.

"WILL some of our primary principals observe the effect of seats with and without desks, and give us the result of their observations?"

We will supplement our correspondent's query, with this: Has not the time arrived when every child fit to go to school should be provided with a desk, for which legitimate use can be found daily?

A CORRESPONDENT says: "I, who prided myself upon the accuracy with which my class pronounce, submitted the list of words given in your January number for pronunciation, with a result that made me very impatient. I referred them to the dictionary, and found them equally unable to determine the pronunciation. No more telling the pronunciation of a word to pupils in my class! They will determine it from the dictionary. I trust by the time your next list is ready, I can give a better account."

THE MOHAMMEDANS are wont to write verses from the Koran upon bits of parchment, which they wear as amulets, thinking thereby to preserve themselves from danger and death. We smile at their simplicity; yet it is a fact, that some quotation coming into one's mind when utterly discouraged and cast down, has braced up the nerves for one more struggle, which, happily, was crowned with success.

To the tired and discouraged teacher, there are many passages in the thought-masters of the past, peculiarly applicable. Here is one from Coleridge:

O'er wayward childhood wouldst thou hold firm rule,
And serve thee in the light of happy faces;
Love, Hope and Patience, these must be the graces,
And *in thine own heart* let them first keep school.

PHILO asks: "Which is right? Five is contained *in* eight four times; or, four is contained *by* eight four times, and why?" Will some one tell him?

In the same vein of inquiry, Philo might ask whether it is proper to say eight and five *are* eleven; or, that eight and five *is* eleven. The old dispute, as between is or are, being in question.

A CORRESPONDENT authorizes us to offer THE JOURNAL for one year to whoever will parse the italicized words in the accompanying sentence. It is a construction found in "good writers," and we doubt not may be found in some of the text-books. It is stipulated that in the parsing the writer must not contradict himself, and that the parsing is to be written out in full, so that if an error be pointed out the contestant may not say that he meant otherwise. He also is to parse them according to rules laid down in Brown's grammar.

"He opposed *his son's being* a *sailor*."

THE WISE MAN has follies no less than the fool, but herein lies the difference: the follies of the fool are known to the world, but are hidden from himself; the follies of the wise are known to himself, but hidden from the world.

"IF you would be known and not know, vegetate in a village; if you would know and not be known, live in a city."

THE KINDERGARTEN AND NURSERY DEPARTMENT.

[Conducted for THE JOURNAL, by Professor KRAUS and Madame KRAUS-BOELTÉ.]

THE KINDERGARTEN IN AMERICA.

PROF. JOHN KRAUS.

A Berlin professor received one day a book with the very promising title: "*So sind die Menschen*" ("Thus (so) are Men"), with the request that he might introduce it to the public by a favorable criticism. The professor wrote only the word "*Nicht*" (Not) under the title-page and sent it back to the author, with the advice, that he first should study the subject before writing on it. The same advice might be given to many persons in this country, who try to explain and write on "What the Kindergarten is." That it is still but little understood in this country, even with some who advocate it, shows the very spoliation of the word, which seems to a German without sense—viz.: Kindergardening, gardening of Kindergarten; Kindergartenism, etc. What next? Kindergartenist? Why not? As each ism is properly entitled to its *ist*, and as the tendency to *ist* in preference to *er* is so noticeable in philologist rather than philologer, the language may soon be enriched with *Kindergardenist*. The suffix *er* may be the designation of either persons or things, but those in *ist* refer only to persons. *Ist* signifies repetition of the act, as a business or profession; *er* leaves this question open—ergo: Kindergartenist. We sometimes receive addresses to Mr. or Mrs. Kindergarten. Now would it not sound better to Mrs. or Mr. Kindergartenist. Who will make the beginning? It is hardly necessary to state here that the literal meaning of Kindergarten is "Children's-garten." The German word "*Kindergarten*," as well as the fact that Froebel was born in Germany, naturally suggests the idea that it may be an especially German thing. There lies, however, at the bottom of Froebel's education a general human idea. As to America, it is here worthy of remark that Froebel already in 1836, in his *Education of Man*, in a chapter discussing emigration as one of the modes of obtaining his purposes, says: "We must emigrate to the country that offer all the conditions for the existence of the genuine human-family life which renders the development of pure humanity possible, where such a life is at least sought and can freely develop. * * * * All these conditions we find in *America*, and, for Germans, more especially in the 'UNITED STATES *of North America*.'" No wonder Froebel was compelled, in his efforts to struggle against authorities that feared loss of power from his success, against the petrified, self-sufficient pedantry of the great majority of teachers, against the indifference and sluggishness of the masses themselves; this was especially the case with his Kindergarten ideas.

He named his first Kindergarten in Blankenberg, near Rudolstadt, General German Kindergarten, and his intention was to transplant it not only to the other States of Europe, but also to America. In regard to the latter, I have the copies of several letters, written by Froebel to his brother-in-law, in which Froebel repeatedly made propositions and suggestions how the Kindergarten could and should be introduced in America. The term "KINDERGARTEN," of course, is German, and has passed with the thing it signifies into all parts of Europe, also to England and America. Here and there it may be called, in Italy, "Girardini d'Infanzia;" in France and Belgium, "Jardins d'Enfants;" in England and America, "Infant Garden;" but, in fact, the thing itself is known everywhere under the name "KINDERGARTEN."

His first Kindergarten was established in Blankenberg, near Rudolstadt. Its scheme was as follows: It shall not only take under its care children under school age, but also give them occupations suitable to their nature, to strengthen their bodies, to practise their senses, and to keep busy the awakening mind—to make them, in a pleasant manner, familiar with nature and man, by properly directing their minds to the first cause of all life, to harmony

with themselves. It was on the four-hundredth anniversary of the invention of the art of printing when Froebel founded his Kindergarten, which was to embrace four institutions: 1st, a model institute for the care of children; 2d, a training school for nurses of children; 3d, an institute for suitable play and amusement of children; 4th, an establishment with which all parents, mothers, educators, and especially future Kindergartners, should be in constant relation by a published periodical. Froebel called his institution Kindergarten because he thought it necessary that a garden should be connected with it, and because he wished symbolically to indicate by this name that children resemble the plants of a garden, and should be treated with similar care. For regarding the introduction of Kindergartens in Germany, I will state, in passing, that until Froebel's death (1852) there were sixteen to eighteen Kindergartens which were conducted by pupils of Froebel I am in possession of a copy of a letter of Froebel's to one of his ablest pupils, from which I will give a brief extract in order to show what Froebel meant by a true and genuine Kindergarten, as also can be seen by the reminiscences of Froebel by Baroness Marenholtz-Bülow (now published in the *New England Journal of Education*, and also in my articles on Fr. Froebel and A. Diesterrveg as "Eisele and Beisele" at Liebenstein), published in this country years ago. In the letter, Froebel compares the Kindergarten with the German oak: "In a true Kindergarten I seek the same thing that I find in the young oak-tree, which was to the old Germans the symbol of power, perseverance, etc, and the bearer and announcer of a higher life. The oak answers the idea of the Kindergartens, as I understand it. An oak is a tree, and the idea of tree is therefore also contained in the idea of 'Kindergartens.' Mostly those, who hitherto have founded Kindergartens, range them alone under the general idea of tree; but as birch-trees, fir-trees, alder-trees, poplar-trees, linden-trees and beech-trees are all TREES, so there are Kindergartens which are like the delicate birch-tree, or the egotistical fir-tree, or the talkative poplar-tree, or who have a similarity with the abundant foliage of the beech-tree; but none of these are like a young, firmly-rooted, symbolic German oak, from which in time would come a sacred oak-grove, where the gods dwelt, and which would generate a sacred race and people amongst whom the gods would like to dwell. In this was required a good and deep soil, suitable surroundings—and *persons* who, in their *will* and action, resemble the oak—who, so to say, *are* oaks. Without the aid of such people, we shall *never* reach our aim," etc.

It was one of Froebel's favorite ideas, and in one of the letters he indicated how such a Kindergarten in America could be organized. N. B—The use of the Kindergarten material cannot be taught by books, says Froebel, because it is purely practical, because the knowledge proceeds *only* from doing, *not* through the printed word, but by the living word, and the use should be shown with the object itself and also at once executed; and for this individuals are *not only* necessary who are acquainted with the American custom, etc., but also who have been especially educated who speak and understand English. Of course, everything should be prepared in America, and the way, so to speak, paved, in order that the work might commence properly. I should think that with your (Froebel's brother-in-law) or your friend's assistance, such a Kindergarten could be carried out in Philadelphia which, later on, might become a model institution—Kindergarten for America." Thus wrote Froebel twenty-four years ago. To-day there are more model Kindergartens in America than in all Europe. But ginger-pop might just as well be labeled champagne as to name such pseudo institutions model Kindergarten. Many complaints come in this respect also from the other side of the Atlantic. On this point, more anon! Also, something about the Kindergartens as reported in the Report of the Bureau of Education. What would people think in Europe to find this report under the *Statistics of Kindergarten: American Kindergarten*, with 55 pupils. Occupations: "All of Froebel's occupations—reading, writing, arithmetic, geography, botany, natural history, and French; for apparatus and appliances: Froebel's gifts—maps, charts, globes, etc. N. B.—Kindergarten children are but from three to seven years old." Also, something about so many advertisements, not only about model schools, but also persons who keep "Model Kindergartens;" even

Training Classes for Kindergartners. Oh! these schools and Kindergarten-keepers!—*keeping* model school!—*keeping* a "Model Kindergarten!" Usually such persons have not the faintest idea what their signs are intended to signify. What is a model school?—a model Kindergarten?

A model school, as its name implies, is a model to be observed and studied as such. It is one of the means employed in a normal school for the training of teachers. It aids, or should aid, in giving to the pupil-teacher a true ideal of his future work, and is one of the very best means to this end.

But a model school, a model Kindergarten, can be made so only by model teachers. Teaching is a practical art, and the practical arts are learned only by practice. No amount of mere theoretic instruction can furnish forth a surgeon or carpenter. The surgeon must acquire strength and precision of muscular movement, as well as knowledge of principles. The carpenter would find few willing to employ him if he had never wielded a hammer or guided a plane, however thorough his knowledge of architecture might be.

"Can you play the piano?" said some one to a youth of some forwardness. "I don't know, for I never tried," was the answer, and it was not considered excessive in modesty.

It deserves here to be remarked that the Baroness Marenholtz long ago advocated that the branch associations of the *General Educational Union* should all unite to found an institution for the thorough education of teachers of all nations to the point of ability to conduct normal schools in their own countries, in order that in time there might be a sufficient number of able Kindergartners to make Kindergarten recognized as the indispensable first step of the public education in all countries. She also, as well as Froebel, looks to America as the true field for the Kindergarten; but she also warns "those people who make a trade of the Kindergarten from lowering the principle of the method and reducing it to a kind of mechanism," as she has expressed in the following letter from Italy:

"LIVORNO, 9 June, 1872.

"DEAR MR. KRAUS:

"* * * I have been absent from Berlin, as my presence was required elsewhere, principally in Italy, where I have assisted in forming new Kindergartens. Accept my best thanks, and rest assured that I value your friendship as coming from a fellow-laborer in our good cause, and return it with all my heart. Health and strength both begin to leave me, so that I feel it a great effort to perform even the most necessary part of my work, and am much rejoiced to become acquainted with vigorous and strong members of our association who will continue the work when we are called away.

"Upon America, where, in truth, a new world is forming, which possesses all the creative powers of a young state, where the individual enjoys full liberty, and no restraint prevents him from carrying out his own designs in his own way, we look as the field for our richest harvest. It is your and your friend's task to do all in your power to preserve Froebel's method in its purity to keep the spirit and leading maxims of his wonderful system alive, which only thus can bring about the reform in education that Pestalozzi, and after him Diesterweg, began—and not education alone, the development of the human race in general is concerned in the question. It is difficult to prevent people who have made a trade of it from lowering the principle of the method and reducing it to a kind of mechanism, but you must have the courage to struggle against it, even at the risk of encountering hostilities. Here, in Italy, our course has been very favorably received, and we found many who were willing to support it; the government, too, assisted in the foundation of a new Kindergarten. We opened one at Florence, where I had been lecturing during the Winter until the 1st of March. It is conducted by one of my best Kindergartners, and promises to become a model institution. The locality is exceedingly convenient, and has been obtained gratis from the municipality. Several other Kindergartens have been formed in different cities.

"What is principally wanting here is also wanting in America—viz.: translations of German works in the vernacular tongue. There are extracts from my writings in all possible languages, for which I receive no credit, but little is translated as a whole, which only could be of use. The book—'*Das Kind und sein Wesen*' (The Child and its Nature)—which is being translated into Italian, would prove very

useful it it were translated into English. Likewise, also, '*Die Arbeit und die neue Erziehung*' (Education by Labor, etc.).*

"I hope soon also to hear from your own work, and that you will let me know what result the 'call' to a participation in a General Educational Union had, which I wrote down from my deepest conviction. Here it was successful; we have several unions of the kind already. I was very glad to see that you understand the importance of the subject so correctly, and also that you published and commented it in the two languages (German and English). Next month I shall leave Italy and begin my work in the Tyrol.

"Sincerely your friend,

BERTHA VON MARENHOLTZ."

In regard to the General Educational Union, it may here briefly be stated that it grew out of the meeting of the Philosopher's Congress, at Frankfort-on-the-Main, in 1869.

It is already, although small in number, the most important and most advanced of all educational associations in Germany, very wide in its range and international in its character, extending its hand abroad for co-operation to all nations. The aims of this union comprise not only the education to be received in schools, but all human education, in family, in school, in professional life, from earliest infancy up to full maturity, to the whole course of which Froebel's ideas and principles are applicable. The organ of the Union is "Die Erziehung der Gegenwart." The Education of the Present, which, according to the Baroness Marenholtz, seeks to set in operation means that shall bring about this reform, for which preceding systems have not provided. A few words by the Baroness only may be appropriate here to the principal means for accomplishing these ends.

"All development and unfolding require activity corresponding with the organism of natural motion, which is expressed in circulation and change of material. Activity, which touches spiritual development, is the exercise of an analagous law. Change of material finds its analogy in the spiritual world, in the opposing elements of taking and giving. The impressions of the outer world, taken in by the senses, are worked into representations in the inner world, in order to be given out again through human activity and its works. In this exchange of outer and inner activity consists the building up of man, and it corresponds to the chemical change of material in nature. The law which lies at the root of the inevitable facts going out from the self, may be called the law of all facts. Froebel uses it for the guidance of childish activity, in order to bring this activity up to the point of representation and discovery, like the production of animal instincts, which also are founded upon law. That the expected result is thereby attained, proves the justness of the principle, which receives its whole significance, first through practical operations, whether Froebel expresses his law by the formula, 'the connection of opposites,' or otherwise As by contrasts (opposites) in every movement, that action and re-action are designated; so every thesis demands its antithesis, whereby arises synthesis. The principle laid down by Froebel, as the basis of his method of education, receives a wider significance by his application of it, because it effects the steady conneetion of spiritual and bodily activity, and, even in childhood, brings these up to the point of free creativeness. The organisms of nature are formed after the general law determining each; so the child must form itself out of his own being, but that is only possible when his action becomes creative, and his works mirror to himself his own individuality, as works of art are the reflex image of the artist. Thus one of the chief demands of our times is fulfilled, which will enoble every work, and excite to an activity worthy of man; while hand and heart work together, bodily and spiritual effort and use are united; the work proceeds morally, and is a means of education which is not to be gained by mere mechanical activity. Only through the new beginning, which is made possible by Froebel's system of education, is the building up of society, according to present needs and conditions to be attained. Only through preparation in earliest childhood on all sides, will it be possible that the schools which follow the

* The first has been translated by M. Kriege and published by E. Steiger, and the second translated by Mrs. Horace Mann, and will be published this Spring by J. W. Schermerhorn & Co.

Kindergarten, and the means of education that follow schools, shall give the results of well-founded principles and cultivated powers in both intellectual and industrial pursuits. For in this manner the elements of knowing and doing become the property of all, and means and opportunity are offered for the endowment of all, by which still higher knowledge and doing may be secured for further development."

By the by, the previously-mentioned "Call" by the Baroness Marenholtz has given the first opportunity to a public recognition of the Kindergarten cause in this country—namely, before several teacher's conventions, viz.:

"At the Second Annual Convention of the German American Teacher's Union, held at Cincinnati, Ohio, in August, 1871; at the Third Convention of the same Union, in Hoboken, N. J., in July, 1872; at the Twelfth Annual Convention of the National Educational Association, in Boston, in August, 1872; at the Thirteenth Annual Convention of the National Educational Association, at Elmira, N. Y., in August, 1873. First of the convention in Cincinnati.*

"It was expected that an address on the education of girls would be read by a lady, but a telegram announcing that she could not be present was received. Mr. John Kraus, of Washington, was requested to make some remarks.

"Mr. Kraus availed himself of the opportunity to call the attention of the convention to a document which, although offered last, he hoped would not be found the least interesting and worthy of consideration. It had been sent to him in order to publish in this country, and he deemed it proper to make it first known to the Teachers' Union—namely: 'Call to a participation in a General Educational Union.' The society had recently been formed in Dresden, embracing members from all parts of Germany, and even Holland, England and America; that the "Call" was signed by persons of high respectability and social and official position; that the association had a similar aim as the Philosophers' Congress in Germany, whose praiseworthy efforts were made to bring about and strengthen a cordial and sincere intercourse between school and home; that at all times and by all nations this truth had verified itself that the elevation of schools had also promoted the welfare of the State in all directions; that in all countries where there flourished industry and commerce, arts and science, one would be sure to find also good schools; that the efforts to emancipate the school from all narrow bondages and fetters, from church and political persons, and to afford and vouchsafe what was necessary to her development, was a triumph of the modern times; that the school should not only become the foundation of material interest in the judicious instruction and good education of the youth, should join their hands; that just as the political association endeavored to explain political questions, *so should it become the aim of the educational association to lay open to the people the true meaning of instruction and education, and to bring about a more effectual and cordial intercourse between parents and teachers;* that it was more especially the work of the teachers' associations and conventions to produce this effort; that while the humanist adhered to history and to that which has grown out of history, Rousseau has discovered and emphasized the laws of development of the individuals. He exerted, and still exerts, an immense influence, and here in America more than anywhere else. The very constitution of the United States bears deep and direct traces of him, and many a pedagogue, who would be horrificd to be called a disciple of Rousseau, preach piecemeal his doctrine. Whether for good or evil, Rousseau begins an era in education, and Pestalozzi invented the means of this development. Fichte put in the right light the idea of national education. Froebel has succeeded in opening family education and the nursery of his Kindergarten system. That this system was the result of the progress of education and culture in general, and of a want of rising generation; that its fundamental principle, being the same which Pestalozzi carried out so ably, must become the ground-work of educa-

*Compare reports of the Commissioners of Education —1871. Article on the German-American Teachers' Union, in which a brief account is given on the second annual convention at Cincinnati, Ohio, in August, 1871, pages 423 and 424.

tion by all nations; that, for this reason, the aims, means, and fundamental principles of the General Educational Union were just as applicable in this country as in the Old World; that the Kindergarten system was a medium between home and school, and that it was especially the aim of this Union to bring both into co-operation; that the most of the signers of this Call have already worked many years for this purpose, and not only by words, but also by deeds; that by the efforts of Baroness Marenholtz alone, the Kindergartens have spread all over Europe, even to America.

The General Educational Union is a wandering meeting, which will meet annually, at certain places. (The first regular convention was at Dresden, in the Fall of 1872; second, at Cassel, in September, 1873; the third, at Brunswick, May, 1874; the fourth, again at Dresden, October, 1875), and aims to make education and its improvement a common cause of the people. The means are as follows: The formation of branch societies, whose object it is to establish institutions for the better education of females, with a special view to their general educating talent; to introduce improvements in educational institutions, for the furtherance of the bodily and mental health of the pupils; to multiply Kindergartens, particularly people's Kindergartens (Volk's Kindergarten), and unite them organically with the public schools, youth gardens as a continuation of Kindergarten; provision for proper juvenile books and papers and enlargement of popular libraries; training of teachers of both sexes in a normal institute, constructed according to the principles of the society; publication of a paper, promulgating the principles of the society in a popular way, a supplement of which would be distributed gratuitously to mothers of the working classes, for the purpose of teaching them the general principles of hygiene and education, etc.

The fundamental principles of the society are, that the thorough improvement of our educational systems is to be secured by beginning with the life of the individual; that education should assist, but never disturb, a free development of the individual, in accordance with human nature; that the general aim of all education is to educate morally free, religious, and practically able men and women; that the present time requires particularly that education should tend to the formation of character, to develop power to will and to do the beautiful, ideal, and sublime; that the society acknowledges in Froebel's system of education the safest foundation for the early education of children, and finds in it leading features for all degrees of higher education.

School Board and Society Transactions.

NEW YORK BOARD OF EDUCATION.

A stated session of this Board was held on Wednesday afternoon, February 2.

Present—William Wood, Esq., President, and the following Commissioners: Messrs. Baker, Beardslee, Caylus, Dowd, Fuller, Goulding, Halsted, Kane, Kelly, Klamroth, Mathewson, Place, Traud, Walker, West, Wetmore, Wilkins—18.

Absent—Commissioners Hazeltine, Schell, Vermilye—3.

The minutes of meeting of January 19th were approved.

Communications were read from the President of the Board to the Comptroller of the city, inquiring as to the date of the transfer of the educational moneys to the control of the Board, in accordance with the opinion of the Corporation Counsel, and also from Commissioner Herring of the same tenor, and containing an announcement that he had procured a mandamus from the Supreme Court, directing the Comptroller to show cause why certain moneys should not be placed under the control of the Board of Education; also, from the Hon. Andrew H. Green, questioning the legal accuracy of the opinion of the Corporation Counsel, and hesitating to act upon it without further examination. In the meantime, in order that no inconvenience may accrue to teachers and others, he will continue to disburse the moneys in the usual manner, for the present.

The next business in order was the consideration of Reports and Communications from Trustees, which were in the usual manner referred to appropriate committees of the Board. The report of the Inspectors of the Fifth District—Messrs. Agnew, Kimball and Abbe—was received. The inspectors call the attention of the Board to the inadequacy of the accomodation of Public School No. 35; also, to nuisances occasioned by stables, near School No. 40; also, to the injury to health of the teachers of Primary School Nos. 28 and 29. occasioned by manufacturing of gas at the foot of East Twentieth street; also, recommending one-half hour recess for primary children at noon, and dismissing for the day at 2 o'clock; also, the use of the needle in the school and sewing exercises. The report was received and appropriately disposed of.

The Superintendent of Truancy presented his usual report, of which there is nothing special to note.

Under miscellaneous communications, petitions were received, favoring the study of German in the public schools, from 48 different associations, mostly German organizations.

After some minor business, Commissioner Goulding offered the following, which was laid over under the rules:

Resolved, That the Committee on Normal Colleges be requested to consider the propriety of organizing a normal school or class for instruction of the male teachers employed in the grammar schools, to hold its session in such place and time as the Board shall approve.

The President then announced as the special order of business the consideration of the amended report of the Committee of the Whole on the study of French and German in the schools.

A spirited debate ensued, in which Commissioners Fuller, Mathewson, Beardslee, Wilkins, Klamroth, and others took part.

The report of the Committee was finally adopted, which provides for a limited amount of instruction only in French and German in the schools. The following is a summary of the sections of the report affecting this question, adopted:

Section 39 provides that teachers in French and German shall be classified with teachers of music and drawing as special instructors; they are to be paid at a rate not to exceed $1.75 per hour, for time actually employed.

Sections 76 and 79, with the accompanying resolution, provides for the licensing of teachers by the City Superintendent, and the arrangement for the study of those languages by the trustees, under certain contingencies, and

the preparation of a suitable course of study therefor.

[NOTE.—It is to be understood by this action, that the Board disapproves of the instruction of German and French, as graded studies, in the schools of New York City.]

A motion to discontinue Grammar School No. 6, located on Randall's Island, was laid over.

The Committee on Normal Colleges presented a report, which was referred to the appropriate committee, embodying the suggestion of the President in his annual address, in favor of granting teachers' licenses to the graduates of the Normal College. It provides that the examination papers shall be prepared by the City Superintendent and President of the college, and to be approved by the committee in charge of the college, and that the Superintendent and the appropriate inspectors shall give such necessary attendance as the law provides. Graduates will be required to conform to further minor details, and the City Superintendent will award the certificate of license on the occasion of the public graduation of the candidates.

The Finance Committee presented a full and interesting report and statement, embracing the financial transactions of the Board, extending over the years 1874–'75.

Commissioner Goulding presented a resolution containing some strictures on textbooks in use in the Normal College, and asked that they be stricken from the list. The resolution was referred to the Committee on Normal College; after which the Board adjourned.

A stated session of the Board was held on the 16th inst.

Present—William Wood, Esq., President, and Commissioners Baker, Beardslee, Caylus, Dowd, Fuller, Halsted, Kane, Kelly, Klamroth, Place, Traud, West, Wetmore, Wilkins, and Walker, Vermilye, Hazeltine, Mathewson, Schell, Goulding—21.

The Superintendent's report for the month of January was presented, from which it appears that the attendance during the month was over 101,000, or nearly 8000 in excess of that of January of last year.

The Superintendent called attention in his report to the inequality in school accommodation in certain districts.

A communication was received from the Hon. Andrew H. Green, asking for a statement showing the names and the amount of salary paid the employés of the Board, with a view, answer and enquiry from the Legislature. It being understood that in the general consideration of the propriety of reducing salaries of city employees, that the public school teachers will be included.

The report of the Superintendent of Truancy shows that about seven hundred cases had received attention.

Various resolutions were passed affecting the general and local school interests.

Among the important reports adopted were those embodying the rules governing the examination of graduates of the Normal College, and the issue of teachers' licenses to the same, more particularly noted in our previous report.

A resolution offered by Commissioner Dowd authorizes the expenditure of $2000 for the preparation and printing of a history of the public schools of New York, and that Superintendent Kiddle and Professor Scott be requested and empowered to prepare the same.

The report of the Committee on Study, submitting courses of study on French and German for the three first grammar grades, was adopted.

Also, a resolution was adopted, adding the Harper's New School Geography to the school list price, not to exceed $1.33.

After the receipt and disposal of routine communications, the Board adjourned.

His Honor, Mayor Wickham, attended the last meeting of the Board, and, after a brief recess devoted to an interchange of courtesies among the members, the Mayor resumed his seat beside the President, and remained throughout a considerable part of the meeting an attentive and interested observer of the proceedings of the Board.

BROOKLYN BOARD OF EDUCATION.

A regular meeting of this Board was held on Tuesday, February 1st, at 4 o'clock—President Whitlock in the chair, and the following members present: Messrs. Ammerman, Bay-

lis, Bennett, Garret Bergen, Burr, Burger, Burke, Campbell, Carroll, Cadley, Clyne, Cocheu, Cole, Culyer, Cunningham, Flaherty, Fischer, Forman, Gates, Hardenburgh, Hall, Hurlbut, Huntley, Libby, Lowell, Maujer, Marcellus, Murphy, McGrath, McGuire, O'Brien, Prosser, Richardson, Rowe, Rosman, Rhodes, Schapps, Schwarzwaelder, Sparrow, Sprague, Shepard, Thomas, Williams.

The usual routine business of the Board was transacted in order, including the reading of the minutes of the preceding meeting, which were approved; reading of reports and communications, which were referred to appropriate committees, and the usual reports of standing and local committees. A spirited discussion occurred on the report of the Book Committee, and their report was only partially concurred in.

Resolutions to the following effect were presented and acted upon by the Board:

Adopting the Revised Rules, Regulations, etc., for the government of the schools.

Authorizing the Committee on Printing to have printed 2000 copies of the Rules and Regulations of the school, to have distributed among the principals and teachers, and 200 additional copies with the Rules and By-laws of the Board, for the use of members; also 300 copies of the same, printed on cards, to be placed in the several school departments.

Also, that the course of study be referred to the Committee on Studies for revision and report.

Also, that it be referred to the Committee on Studies to inquire into the feasibility of introducing the study of German in schools, and report thereon, together with the probable annual cost thereof should their opinion be favorable.

Also, whether it should be taught as a general or special study.

Adopting Swinton's primer and composition books, and Patterson's drawing books.

Authorizing the purchase of seven lots, northeast corner of Sixth avenue and Eighth street, 100 x 175 feet, for $11,500.

Referring a resolution to relieve assistant principals of the primary department from teaching, to the Teachers' Committee, with power.

Directing the examination of title in two lots on Middagh street, adjoining School No. 8, and, if found perfect, to purchase same, price not to exceed $14,500.

Requesting the President of the Board and the Superintendent to report as to the representation of the educational interests of the city of Brooklyn at the Centennial.

After which the Board adjourned at the hour of 7 P. M.

An adjourned meeting of this Board was held on the 8th inst., at 4 P. M.—Mr. E. J. Whitlock in the chair, and the following members present: Messrs. Ammerman, Baylis, Bennett, Burr, Burger, Burke, Campbell, Carroll, Cadley, Clyne, Cocheu, Cole, Culyer, Cunningham, Flaherty, Fischer, Forman, Gates, Hardenburgh, Hall, Hurlbut, Huntley, Libby, Lowell, Maujer, Marcellus, Murphy, McGrath, McGuire, O'Brien, Prosser, Richardson, Rowe, Rosman, Rhodes, Schapps, Schwarzwaelder, Sparrow, Sprague, Shepard, Thomas, Williams

In accordance with the rule of the Board, the consideration of local and general resolutions was constituted the first business, and resolutions to the following effect were presented and acted upon:

Authorizing the purchase of piano-stools for No. 13, and construction of book-closets for same.

Painting the outside of No. 14.

Providing writing desks for two class-rooms in No. 16.

To divide class-rooms, grammar department, No. 19.

To purchase piano-covers for No. 21.

To appoint additional teacher for No. 24, and construct storm-doors at the basement entrance.

To increase heating facilities in No 25.

To have additional apartments for primary school accommodation in No. 26, and to furnish the same, and to employ an additional teacher; authorizing committee of the same school to hold commencement and reception exercises in other than the school building.

Authorizing the preparation of plans and specifications, and the advertisement for proposals for additional heating, School No. 27.

Authorizing sewer connection and the construction of wardrobes, School No. 33.

Authorizing the employment of two additional teachers, primary department of No. 35.

Authorizing the purchase of a Davies' Lunatellus for No. 18.

Authorizing the preparation of plans for a new primary school-building and janitor's house in Twenty-second Ward, and report same to the Board, and that $2500 be appropriated for construction of the latter.

Authorizing the furnishing of one room in Primary No. 4, with desks.

Authorizing the purchase of piano, stool, and cover for Primary No. 6, not to exceed $275; also, one clock for primary department of same.

Ordering repairs to Superintendent's office.

Transferring the care and supervision of the Prospect-street school-building to the Committee on Studies.

Directing the supply of postal cards to principals of schools, for use for school purposes.

Authorizing the expenditure of $100 for the preparation of census blanks.

Directing an inquiry to be made by the Law Committee, as to the law effecting the transfer of the Truant Home to the Board, and to announce to the city authorities the willingness of the Board to accept the custody of the same.

Authorizing the Eastern District Library Committee to expend $1500 for the purchase of new books.

The subject of increased school accommodation came up for discussion, on the request of the Local Committee of Public School No. 26, where the existing primary school accommodation is insufficient. The committee were authorized to hire suitable rooms for the purpose. Plans for a new school-house in the Twenty-second Ward were ordered to be prepared. The discussion on this latter question elicited a positive expression from the Board, in favor of providing primary-school accommodation only in this building, and the plans were ordered by the Board with that understanding. The Board devoted considerable time to the discussion of proposals for supplying stationery and contracts, which were finally awarded to Messrs. Slote, Woodman & Co., of New York; R. M. Whiting & Co., of Brooklyn; Scribner, Armstrong & Co., of New York, and others. Serious charges were made against one of these firms for unbusiness-like proceedings, and a heated discussion took place among members, during which the committee having the matter in charge were criticised.

On the resolution asking for authority to expend $1500 in the purchase of new books for the use of the Eastern-District library, some opposition was developed which was, however, overruled by the Board, and the authority granted; after which, the Board adjourned.

TEACHERS' ASSOCIATION, NEW YORK CITY.

Under its very successful management, this Association provided for its members and their friends an interesting and entertaining reception at Steinway Hall, on Friday afternoon, 11th inst. The exercises were made up, for the most part, of readings, by Mr. A. P. Burbank, an accomplished and versatile elocutionist from the West. He read with much humor, and to the satisfaction of his large audience, "Our Senator in Florence," by DeMille; "Brudder Anderson," by Thomas K. Beecher; "Mark Twain's Literary Nightmare;" "Col. Sellers' Oriental Infallible Optical Liniment," and the "School-boy's Composition;" and as a marked evidence of his versatility, he read, with effect and with great pathos, "Surly Tim's Troubles," and "Rip Van Winkle after the sleep."

Miss Clementine Lasar had been advertised to sing, but was prevented by illness, and her place was very acceptably filled by Miss Maria Brainard (Mrs. Dr. Clare W. Beames).

Mr. Southerland presided with his usual success, starting the exercises promptly, and, at the close, called upon Mr. Wood, President of the Board of Education, to say a few words to the teachers. Mr. Wood promptly responded in a few congratulatory and humorous remarks; after which, the audience were dismissed.

BROOKLYN TEACHERS' ASSOCIATION

The third entertainment for this season, under the auspices of this Association, took place on Friday evening, 25th inst., in Apollo Hall, Eastern District.

The programme consisted of music, readings, and dancing, all of which tended to make

up a very pleasant and enjoyable evening. The result of the efforts of the Association to bring about a more intimate acquaintance among its members, has met with very gratifying success. The singing, by Miss Chittenden and Miss Tooker, the accompaniments, by Mr. E. D. Ford, the orchestral music, by Dr. Knight's orchestra, and the readings, by Prof. J. W. Hartley, were very satisfactory.

The officers of the Association for 1875–'76 are as follows:

President—Edward Bush.

First Vice-President—Sara L. Stilson.

Second Vice-President—Harriet A. Dennison.

Recording Secretary—Maria H. Blanding.

Corresponding Secretary—Henry W. Hayward.

Treasurer—Agnes Reilly.

GEORGE T. TRIMBLE ASSOCIATION.

The eighth annual dinner of this Association, connected with old Public School No. 7, took place on Tuesday evening, 15th inst. Preceding the dinner, a business meeting was held, at which the following officers were elected for the ensuing year:

President—Hon. Orestes Cleveland.

Vice-Presidents—N. P. Beers, George F. Gantz, Henry L. Slote.

Recording Secretary—William Raynor.

Corresponding Secretary—William Kellock.

Treasurer—Richard Hamilton.

Executive Committee—Charles P. Rogers, Chairman; John Henry Hull, Bradford Willard, James V. Schenck, Andrew D. Bloodgood, Joshua S. Cooley, George P. Payson.

A committee, consisting of Messrs. John W. Greaton, Daniel Slote and others, were appointed to collect moneys for the Lancaster Memorial Fund.

The members of the Association and invited guests then sat down to a sumptuous feast, in Sieghortner's best style. The tables were tastefully ornamented with choice pieces of confectionery, together with a profuse floral display. This interesting exercise was accompanied with choice music, under the direction of Antone Stroub.

The proceedings, *post prandium*, were made up of speeches by F. C. Wagner, B. D. L. Southerland, Rev. W. N. Dunnell, J. H. Hull, J. J. Anderson, G. F. Gantz, J. S. Cooley, Daniel Slote, and others. The following telegram, from a sister association in San Francisco, was received and read amid much enthusiasm:

"Your old schoolmates on the Pacific send greeting, and hope we will have many happy re-unions to perpetuate the memories of old Number Seven!"

During the evening the following ode, words by J. Frank Wright, of Grammar School No. 7, was sung:

GREETING SONG OF THE OLD NO. 7 BOYS.

COLLEGE AIR.

1. We Won't Go Home Till Morning. 2. America.

Old Boys, we're glad to meet you;
With hearty cheer we greet you;
With best of fare we treat you,
To drive Dull Care away.—*Repeat 3 times.*

There's nothing here to harm you;
There's nothing to alarm you;
But much, we hope, to charm you,
And drive Dull Care away.
So say we all of us, etc.—*Air, America.*

We come not here to prate, sir,
Of either Church or State, sir;
With us it seems innate, sir,
To drive Dull Care away.—*Repeat.*

We learned in our Old School, sir,
That Care is an old fool, sir;
And Ketchum gave a rule, sir,
To drive Dull Care away.
So say we all of us, etc.

We toiled not quite in vain, sir,
Both sense and cents to gain, sir;
We're surely not to blame, sir,
To drive Dull Care away.—*Repeat.*

Then boys, fill up your glasses,
We'll toast the lads and lasses,
That formed Old Seven's Classes,
And drive Dull Care away.
So say we all of us, etc.

The festivities continued to a late hour, and were marked by the utmost good feeling and enjoyment, and it was agreed that this re-union was, by far, the most successful and enjoyable one since the organization of the society.

LENOX LIBRARY.

This institution was designed, we believe, after the temple of Diana, and is located on Fifth avenue, between Seventy and Seventy-first streets, covering the whole face of the block. The estimated cost of land and building was about $1,000,000. No expense has been spared in the selection and purchase of books and other material, and while the greatest reticence is observed regarding the probable opening of the Library, it is now generally believed it will occur some time in the connection with the Centennial celebrations.

LONG ISLAND HISTORICAL SOCIETY.

This society, in pursuance of its custom at this season of the year, has recently provided an excellent lecture upon China, by Dr. S. Wells Williams. Dr. Williams, it will be remembered, is Secretary of the American Legation at Pekin, and having resided for over forty years in China, it may be safely assumed that the lecture was a valuable one. Of Confucius, he said, he looked upon as a man raised up by God to show the character of the Chinese. The language which he wrote has been made the intellectual centre of Chinese literature, and is used to-day just as he wrote it. It was Confucius' theory that obedience was the key-stone of society—the child to the parent and the citizen to the constituted authority. Improvements in education were being constantly made. By the last census, it appears that China has a population of 360,000,000.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

Professor Darwin G. Eaton, of Packer Institute, delivered a very instructive lecture, at the hall of the Association, on the 7th inst., on Stars, and Stardust, the interest in which was very much enhanced by illustrations thrown on a screen by the aid of the stereopticon. Professor Eaton gave his hearers much valuable information on the subject, and incidentally drew upon his inexhaustible fund of information, and explained to his hearers many of the recent astronomical discoveries.

SCHOOL NOTES.

The 4th semi-annual re-union of the Graduates' Association of Public School 15, Brooklyn, took place on the 28th of January, at the Brooklyn Lyceum; during which the comedy of the Little Treasure was performed. Miss Reid, Miss Bridgman, Miss Rafferty, and Messrs. Kimball, Pearce, Tamagno, and Smith performed their several parts very satisfactorily to their friends. The music, consisting of solos by Misses De La Pierre and Griffing, were sung with excellent taste and skill. Dancing concluded the exercises of the evening.

PUBLIC SCHOOL NO. 18, BROOKLYN.—The graduates of 1874, belonging to this school, held a very pleasant meeting at the residence of one of their members—Miss Amy Mason.

The teachers, trustees and pupils of this school met together under very pleasant circumstances recently, to evidence their love and esteem for Miss Eliza Ford, and Miss G. P. Fendall, who were for many years teachers in that school, but who have been recently called to more responsible positions elsewhere.

PUBLIC SCHOOL NO. 22.—The distribution of semi-annual certificates at this school, was attended with very pleasant exercises, on the 21st inst.

PUBLIC SCHOOL NO. 14.—Very agreeable and interesting exercises in connection with the academic class day of this school, took place on the 18th inst.

MISS WHITCOMB'S SEMINARY.—The French class connected with this excellent institution, gave an entertainment to their friends on the evening of the 21st inst. An allegorical play in French was performed, in which the pupils of the class represented the characters of the play. Later in the evening, dancing and other enjoyments were indulged in.

THE EVENING SCHOOLS of this city closed this month, many of them with interesting exercises, which proved very enjoyable to the pupils and their friends.

The Brooklyn schools closed in the month of January, under similar circumstances.

VARIETY.

THE PROFESSOR OF THE FUTURE.

This Lady Professor's so wondrous wise,
  Her very face is a *study;*
She mounts a pair of celestial blue eyes,
  And her mouth's small ellipsis is ruddy.

To masculine pupils of various age
  She lectures—for such is her duty;
And the young ones think her an absolute sage,
  And the old ones a perfect beauty.

Her small white hand has a clenching force,
  If sometimes her facts look like fiction;
And, whate'er be the logic of her discourse,
  Her smiles breed instant conviction.

Such sweet little theories doth she advance,
  And her eyes emit proofs so thickly,
Her senior disciples fall into a trance,
  Her junior in love as quickly.

Now, though *Punch's* opinion should go for nought,
  Or be slighted as merely funny;
He holds that if thus the *old* fellows be taught
  The *boys* will get most for their money.

—"Jennie June" relates this reminiscence of her life at Southbridge, Mass.: "I had only one enemy in Southbridge, to my knowledge, and that was an elderly deacon's wife; the way it came about was this: I was my nephew's teacher, as well as my brother's housekeeper, and on one occasion, when we had been invited to dine in state at her house, she called out to Egbert in a high voice from her end of the table, 'Sonny, won't you have some puddin'?' and to the horror and consternation of his papa and myself, the terrible infant replied, quite as loudly, 'I guess if you lived at our house, my aunt would make you say pudd*ing*.' I am sure at that moment I wished grammar and correct pronunciation were with truth at the bottom of a well, but it was of no avail. Going home, my reverend brother remarked, 'It will never be forgiven, Jennie'—and he proved to be right; it never was."

—A brother savant recently rallied Prof. Tyndall upon the subject of his rumored engagement to a daughter of Lord Hamilton. The great scientist didn't deny the soft impeachment. Encouraged thereby, his friend pursued the subject with the view of discovering what special attraction could have conquered a man who had so long resisted the fascinations of the sex.

"Is she prettier than other ladies you have seen?" he asked.

"No."

"Is she wittier?"

"No."

"Is she more cultivated?"

"No."

"What, then, is her particular charm?"

"She has less dynamic force," said the Professor.

—A certain parson, who is also a school-teacher, handed a problem to his class in mathematics the other day. The first boy took it, looked at it awhile, and said, "I pass." Second boy took it and said, "I turn it down." The third boy stared at it awhile, and drawled out, "I can't make it." "Very good, boys," said the parson, "we will cut for a new deal." And the switch danced like lightning over the shoulders of those depraved young mathematicians.

—"Class in the middle of geography, stand up," said a school-master. "What is a pyramid?" he asked. "A pile of men in a circus, one on top of the other." "Where's Egypt?" "Where it always was." "Where's Wales?" "All over the sea." "Very well," said the school-master, "stay there till I show you a species of birch that grows all over this country."

—Art received another awkward criticism from a free-and-easy young man who recently met a sculptor in a social circle, and addressed him thus, "Er—er—so you are the man—er that makes—er—mud heads?" And this was the artist's reply: "Er—er—not all of 'em; I didn't make yours."

SWEETLY-PRETTY VERSES.

When pickled pork sausages whisper their love,
And tell their round tale to the square turtle-dove—
Oh, then what a beautiful sound 'tis to see
The fiddle-strings grow on the mutton-chop tree.

When greedy gold watches sing "God save the Queen,"
And snarly-tailed kittens row boats on the green—
Oh, then how those dear girls, with buckets of brine,
Make one feel that the church-bells of ocean are mine.

When curly cock-lobsters are scratching their shins,
And penitent oysters tell parsons their sins—
Then, oh, how St. Paul dances round the new moon
To think that last week will be back again soon.

When lovely lorn lettuces laugh in the morn
And the cucumbers' chorus is smelt in the corn—
Then, oh, how my brain bounds with billows of glee
To the clang of chrysanthemums over the sea!

SCOPE FOR A GOOD VOICE.—There was a French singer with a tremendous voice who could not discover what line in art he was best fitted for. He went to Cherubini, who told him to sing. He sang, and the foundations trembled. "Well, illustrious master," he said, when he had finished, "what shall I become?" "An auctioneer," was Cherubini's curt reply.

—At a young ladies' seminary recently, during an examination in history, one of the not most promising pupils was interrogated: "Mary, did Martin Luther die a natural death?" "No," was the reply; "he was excommunicated by a bull."

"CENTENARY."—In these days of Centennial commemorations an orthographer's eye is offended by the prevalence of this mode of spelling. Analogy and etymology require "centennary."

—It is stated that a Fort Plains young lady received the following note, accompanied by a boquet of flowers: "Dear ——, I send by the boy a bucket of flours. They is like my luv for u. The night shade menes keep dark. The dog fenil menes that I am your slave. Rosis red and posis pail, my love for you shall never fail."

—"Have you ground all the tools right, as I told you this morning when I went away?" said a carpenter to a rather green lad whom he had taken for an apprentice. "All but the hand saw, sir," replied the lad promptly; "I couldn't get all the gaps out of that."

—*Topsy's* and Mrs. Woodhull's show bills got mixed on Lockport walls. This was the combination:

"Oh, Golly! I'se so wicked!"
VICTORIA C. WOODHULL,
QUEEN OF THE ROSTROM.

—"My son," said a stern parent to a seven-year-old hopeful, "I must discipline you. Your teacher says you are the worst boy in the school." "Well, papa," was the reply, "only yesterday she said I was just like my father."

—The "leap-year necktie" for gentlemen is out. We have not seen it, but suspect it is a young lady's sleeve, with an arm in it, and goes all the way around the neck. Every enterprising young gentleman should have one.

—It is a bad sign to see a man who has been married but twelve months, gloomily pacing his chamber, with his hands nervously thrust into his coat-tail pockets, and muttering to himself: "The world is too much governed."

—A little boy, a few days since, while coming down stairs, was cautioned by his mother not to lose his balance. His question which followed was a puzzler: "Mother, if I was to lose my balance, where would it go to?"

—A Chicago girl writes to the school authorities of that city to say that she "hed bin out of employment for a yeare, and wud teech for $10 a month and bord around."

—Conclusion of a cheesemonger—Mite is right.

Book Notes and Notices.

Illustrated History of the World. By John D. Quackenbos, A. M., M. D. New York: D. Appleton & Co.

We have just received a new History of the World, intended more particularly for school purposes, written by John D. Quackenbos, A. M., M. D., and published by the well-known house of D. Appleton & Co. The book is of moderate size, neatly printed and bound, and liberally supplied with maps and other illustrations. The author is to be credited with a free and graceful style, at the same time graphic and concise in statement, in the pleasing form of a narrative, well calculated to fascinate the reader, no less by its singular beauty of diction than by the marked importance of the events written of, themselves.

We know of no book of this character so commendably free from a confusion of names and dates, which serve usually to bewilder and distract the student. We say this much in its favor very cheerfully, but are, nevertheless, compelled to interpose a criticism on some of the methods adopted by the author, which seriously affect the value of the book in our judgment.

In attempting to outline the history of the world, the author has seen fit to commence far back in pre-historic times, devoting a considerable portion of the first five or six chapters to the Biblical record, as given by Moses and other Scriptural writers. We submit that it hardly comes within the province of the writer of a history for school purposes to enter broadly upon the *terra incognita* of speculation, in which Bible scholars, divines, and scientific investigators are floundering to this day, and among whom the age of the world, for instance, is as much a matter of doubt as ever. To very many intelligent people the Mosaic account of the creation is in perfect harmony with our present knowledge of geology—assuming that the seven eras of geology are coincident with the seven days mentioned in the Bible—and as to the account itself, it makes but little difference perhaps who wrote it, it is true. But to appear to settle the disputes, not only of science but of theology as well, without having read the best thoughts of the disputants themselves, whether it be Colenzo or Kitto, Strauss, Spencer, Darwin, Huxley, Renan, and the rest, is to take upon one's self a burden unnecessarily hard to bear in a matter of this kind, where the policy should have been all the other way. These marvelous events, which have no contemporaneous history to support them, are not, in the main, narrated in the language of the Scriptures, but are paraphrased by the author. Thus, in speaking of Adam and Eve in the Garden of Eden, he says: "Here he led a sinless life, enjoying intercourse with his Maker and the companionship of Eve, whom God created as his helpmeet," etc. "Our first parents, having disobeyed their Creator, were expelled from Eden, and they and their descendants became subject to death," etc., etc. Again, he speaks of "Enoch, who was taken to heaven without dying," and "Cain built a city after his exile." Again, "The average duration of life before the deluge seems to have been from eight to nine hundred years." "It was probably thus prolonged that the earth might become peopled more rapidly." (Here our author seems to have forgetten that it was immediately *after* the deluge that a "prolonged" period of life seemed most desirable for a more rapid increase of population.) We are told that "Solomon maintained seven hundred wives, many of whom were the princesses of neighboring idolatrous nations. In his old age they prevailed on him to worship their gods, and for this great sin the Lord decreed that after his death the kingdom should be given to his servant." (Just how the Lord rebuked Solomon for his "great sin," by afflicting the people *after* his (Solomon's) death, the inquiring reader is not told.)

Now, in our judgment, there are insuperable objections to incorporating into the texts of history these marvelous statements of the sacred Scriptures that have so puzzled the divines of all ages, and are likely to puzzle them for ages to come.

In the first place, the Bible is read more or less by almost everybody in this Christian country, and all our school children who are old enough to read history, are as familiar with these mar-

vellous stories as our historian himself, and the plastic mind of youth ought not to be prejudiced in its judgment, by putting them in juxtaposition and comparison with the simple statements of veritable history. Let the scriptural record, so far as it relates to pre-historic times, stand upon its own merits, and do not profane it by secularization. It is absurd to order the Bible read in our public schools "without note or comment," and then put into the hands of the pupils a history in which the writer undertakes to interpret its statements in the light of profane history. The fact is, it will not bear any such interpretation.

Current history as we understand it, and revealed by the light of modern science, is the result of natural law, and as subject to its irresistable forces as the onward flow of a river is to the force of gravity. Secular history, like science, must confine itself within the sphere of natural causes, and leave to divines and theologians all these controverted theories of divine intervention.

What would be thought of a physiologist who should attempt to explain how the first *woman* was created from the *rib* of the first man, or to explain how Jonah could live three days in the stomach of a whale (if it were a whale, see 1st chap. Jonah) without impairing either his own digestion or the whale's? What would be thought of Prof. Tyndall, if in discussing the possible effects of heat upon living animals, he were to refer to the three Hebrew children as they walked unharmed in the seven-fold heated furnace of the angry King? How much would be added to military science if at West Point, our cadets were to study, as an ancient military art, the peculiar tactics of Gideon's band, so successful in capturing a great city, or attempt to stimulate our heroic youth by holding up for their imitation the valiant Samson, who, with a very modest weapon, slew at one time, a thousand men? Now, we submit that if these events have no historic relation to science or art, they have no historic relation to secular history. If they are impertinent to the one, they are no less impertinent to the other. Nor is it a matter of any importance whether or not there is a rational foundation for a belief in the supernatural. It is not a question of *faith*, or of *fact*, but one of *relevancy*. Works of fiction are read perhaps, more than history, but all readable fiction is possible history.

We have spoken with satisfaction of the absence of many of the senseless details which it has been the custom to encumber ordinary works of this kind, as, for instance, in the case of battles and minor events, the scholar does not need to know the particulars as to the killed, wounded, and captured at a great battle, so much as a clear understanding of the objects and results of the battle itself, and the relative importance of leading characters, and their influence on the times. We are, in the main, opposed to illustrations, except for the distinct and avowed purpose of interesting the young, otherwise they form a useless and expensive element in the manufacture of books which can be safely omitted. In this particular case, we should recommend illustrations like that found on page 11 especially, to be left out of new editions. We are confident that it is within the power of the author and publisher of this book to remove by revision some of the objections which we have endeavored to point out, that must affect its usefulness in any but sectarian schools, and even then it would be better to have the Bible and history in two separate volumes.

THE DEVIL'S CHAIN. By Edward Jenkins, M. P. New York: Harper & Brothers.

Edward Jenkins is a trenchant and vigorous writer, whose use of good English is noticeable in all his works, despite the fact that he has often to put it in harsh phrases. He evidently feels strongly and writes earnestly about some of the defects in the body politic, which custom and a sort of social countenance has aided to fasten upon it.

The "Devil's Chain" is a vivid and forcible exposition of the evils arising out of the use of spirituous liqueurs, in which all classes of society come in, and justly too, for a share of a great and awful responsibility, and, as he says, "In spite of the exposures through the press, of the dismal fruits of the traffic in drink, men go about dining comfortably and voting steadily in utter disregard of their fell, disastrous and diabolical effects." It is not a pleasant book to read, but one, nevertheless, which every thinking man and woman will be better for reading. It is a small, neatly-bound and printed volume, and we hope that it may, as we doubt not it will, have a large circulation.

THE ELEMENTS OF PHYSICAL GEOGRAPHY. By Edwin J. Houston, A. M. Philadelphia: Eldridge & Brothers.

In the preparation of this book, the aim has been, as the author tells us, to supply a concise yet comprehensive text-book, suited to the wants of a majority of our schools. In this respect, perhaps, the book is better adapted for use in private schools, where considerations of cost are not of so much moment to the pupils as to those in our public schools. Physical geography is a subject which is hardly appropriate for any other than the advanced classes where some acquired knowledge of geology, chemistry, botany, and other branches of scientific study serve as useful and necessary adjuncts.

The work is of convenient size, well calculated to escape the dangers and vicissitudes of the larger and more unwieldy books. It is also neatly printed on good paper, and reflects credit upon the publishers. In the presentation of the subject, we see no special reason to commend it over Guyot's, whose maps and illustrations are, in many respects, superior both in comprehensiveness and execution.

THE MIND. American edition. New York: D. Appleton & Co.

This is a new psychological and philosophical quarterly, published in London and issued by D. Appleton & Co. in America—the January number being the first. Among those who have contributed to the first number, are Mr. Herbert Spencer, Mr. Lewis Sedgwick, Rev. John Venn, Mr. Hodgson, Mr. Sully, Professor Flint, of St. Andrews; Dr. McKendrick, of Edinburgh; and Professor Lindsay, and writers of that ilk. As may be supposed, it will, no doubt, prove a very valuable addition to this class of literature.

RATIONAL METHOD FOR LEARNING FRENCH. By Claude Marcel. First book. New York: D. Appleton & Co.

In this work, the author makes at once a radical departure from the established and traditional methods of learning French, and proposes to dispense with grammar, progressive exercises, and in a great measure with the dictionary as well, sending his pupil metaphorically, into deep water at once, and depending upon the emergency to suggest the proper combination and use of his physical powers to get out. As may be supposed, the faculties of sight and hearing are called into requisition, and these are to be aided by curiosity and imitation, natural to humanity. So, by familiarity with seeing the words and imitating sounds, the student will soon acquire a practical knowledge of these important elements to a successful mastery of the language.

The proposition is a revolutionary one, and no doubt, in a large degree, rises out of a justifiable contempt for some of the prevailing methods for teaching the language. Doubtless, a person having had some training, and retaining a familiarity with the elements of French, will make some progress, but we question if any one else could.

The selections are good, in itself a desirable feature, and are made with good judgment, avoiding difficult words, phrases and sentences.

FRENCH CHILDREN AT HOME. By Madame De Peyrac. New York: D. Appleton & Co.

This work is designed to aid those having some knowledge already of the language, and consists of a series of conversations on familiar subjects, calculated to interest and amuse the young. Some of these are decidedly Frenchy, however; as, for instance, on page 114, where the conversation turns on a subject in which the education of American children is happily neglected.

Marie—Je fais dix fiches.
George—Et moi quinze.
Laure—Je double mon enjeu.
Charles—Je suis perdu! etc.
Laure (page 110)—*Regardant ses cartes*, or Je passe.
George—Je fais quatre fiches.

Nevertheless the book will probably serve to interest and instruct many.

HISTORY OF THE CIVIL WAR IN AMERICA. By Le Comte de Paris.

The first volume of the English translation, which embraces, without abridgement, the first two volumes of the French edition, has just been issued by the American publishers, J. H. Coates & Co., Philadelphia.

We have read with care and with much interest, the advanced sheets with which we have been favored, and our conclusions are, that the author has endeavored to present the facts coming to his knowledge, with his own views thereof, in a perfectly fair spirit. It is impossible for the author not to infuse into a work of this character impressions and views, the result of a life-long training and associations so dissimilar to that which he experienced for a few short months while in this country. Nevertheless, as a contemporaneous history, it is not only a valuable contribution to the mass of literature already written on the subject of the late conflict, but in itself forms a useful and interesting account, which may be read with profit by every American. As we have before noted, his opportunities for obtaining information for his work have been unequalled, and it is fair to presume that his object has been to write without bias. His criticisms often coincide with our own, and where they do not, one accords to him the right to his views, though differing from our own. He unintentionally, perhaps, shows an ill-concealed contempt for our volunteer forces, and some of their officers especially ; but this is attributable, to a large extent, to his failure to appreciate the principles which govern our military organization. The book contains much that is new, and has received such favorable notice from distinguished sources, that we do not hesitate to commend it to the attention of our readers. The present volume will be succeeded by the others as rapidly as possible—to be completed in four volumes.

This house also announces the early issue of "King and Commonwealth, the History of Charles the First and the Great Rebellion;" also, an interesting work on "Storms: Their Nature, Classification, and Laws," by Prof. Blasius.

THE COMPLETE COMPOSITION BOOK. By Calvin Patterson. New York: Potter, Ainsworth & Co.

This is an ordinary blank book, to which is added two or three pages of letter-press, containing a variety of valuable information to scholars and adults as well, on the subject of composition; giving useful directions and suggestions, and clear and concise information as to punctuation, use of capitals, etc. The value of this book would be greatly enhanced by producing a serviceable cover with the letter-press by themselves, and the paper supplied separately.

A POCKET MANUAL OF RULES OF ORDER. Price 75 cents. By Major Henry M. Robert, U. S. Engineers. Chicago: S. C. Griggs & Co.

This is a handy little manual for the pocket or desk, containing the rules of order for deliberative assemblies and a compendium of parliamentary law, arranged in an orderly and intelligible manner. The index is well arranged for reference. The book also contains a dissertation on the methods of organizing and conducting the business of societies, conventions, etc.

WE have received the Annual Report for 1875 of Mr. Andrew McMillan, Superintendent of Public Schools for the city of Utica. The Report contains an exhaustive account of the school and educational status of that city, the flourishing and satisfactory condition of which is largely due to the good judgment, practical skill and efficient management of Mr. McMillan.

THE HOME SCIENTIST. Wadsworth, Ohio, the first number of which we have just received, is a neat, eight page paper, whose object is, in the main, to present scientific information in a simple and interesting form to teachers and schools. The present number contains several articles of value, which do not find their way in the ordinary educational journals of the country, and as the terms are very reasonable—$1 a year—it should receive a generous support. The Editor is Mr. Edward Brown, whose knowledge of current scientific matter should enable him to make his paper of interest to his readers.

THE Kings County Medical Society announce the issue of a monthly publication of its proceedings, which will contain the papers, reports, and discussions on scientific and medical subjects before this society. Dr. R. M. Wyckoff, of Brooklyn, is secretary of the society.

THE monthly magazines—the "Atlantic," "Harper's," "Scribner's," the "Galaxy," and the rest for March—come to us full of good material, as usual.

WE have received a number of Books, of which we will take note in our next number.

The Journal of Education.

INDEX—VOL. I.

FROM MARCH 1, 1875, TO MARCH 1, 1876.

Academy of Design, National 121
Air and Ventilation 449
Adirondack Survey 312
A Growing Evil 654
Am I My Brother's Keeper? 653
Art, Our Government as a Patron of 44
Art Miscellany 46, 224, 332, 389, 464, 547, 615, 679, 736, 806
Art, Interesting to Ladies 42
Art, Principles of Decorative 223
Art, Taste in Industrial 805
Arts, Exchanges 432
Art-Schools 546
Art Collections and Their Use 608
Art Work, Elementary 610
Aphorisms of Pestalozzi 90, 185, 353
Aquaria 42
Astronomy, Ancient 601
Bible in the Schools 721
Botany, Popular 528
Book Notices 58, 143, 251, 342, 406, 502, 564, 626, 698, 760, 909
Boys, My 70
Brain and the Intellect 717
British Association, 1875, Annual Address of 669, 725, 790, 868
British Museum, Reading Room of 111
Brooklyn Palette Club 123
Centennial, America at the 374
" Art at the 546
" Circular 753
" our Schools at 867
Character, Strength of 784
Charcoal Briquettes for Drying New Buildings 110
Chemistry, Symbols in 42
Children, Striking of 736
Christmas 777
Civil Rights in the Schools 530
Clocks, About 600
Color and Complexion, Hints relating to 322
College Sports and their Tendencies 373
Colleges, Women's 782
Compulsory Law 529
Compulsory Attendance Act 667
Compulsory Education 867
Creative Wisdom 366
Curious Facts 543
Death Rates 384
Decimal Fraction, What is a 364
Defect, A Radical 357

Dictionary, A New Pronouncing Needed... 594
Diphtheria and Scarlet Fevers... 542
Dietetical Suggestions... 429
Don't Cultivate Ugliness... 660
Drawing in Schools... 46, 112, 546
" as a State Requirement... 123
" Instruction in... 320
" Industrial... 799
" Industrial and Free-Hand... 462
" in Milwaukee Schools... 463
East River Bridge... 109
Education, Advancing Practical... 677
Education, Art... 194
Education Founded on Philosophy... 707
Education of Females, Superficial... 785
Educated While Educating... 22
Education, Negro, The Problem of... 520
Education, Primary, Principles and Methods of... 843
Education in Brooklyn... 1
Education, Compulsory... 36
Educational Institutions of Brooklyn.—Packer Institute... 3
Education, Secular in Schools... 370
Educators, Who are our ?... 32
Education, Waste and Labor in the Work of... 345
Educational and General Miscellany... 49, 126, 231, 326, 394, 468, 550, 615, 682, 739, 809, 883
Education, Relation of Art to... 417
Education, Technical... 125
Educational Training... 761
Educational Convention, State and National... 441
" Problem, Another Feature of... 644
Engineering 2000 Years Ago... 108
" Structures... 212
English, Simplyfying the Teaching of... 36
Evils of Routine in Study... 663
Examinations, Academic Class... 372
Examinations, Semi-Annual... 301
" Test... 574
Exhibition of Scientific Instruments... 41
Failures... 522
Faron, Levi B... 596
Fatigue, The Physiology of... 630
Food and Drink, Adulterated and Impure... 98
Fuchsia, The First... 109
Glaciers, Among the... 581
Graduates' Diploma... 96
Greek Girl, Poem... 278
Harmonious Color Contrasts... 123
High Schools and Normal Training Schools... 79
Heart, Exercise of... 110
Higher Education... 866
Institutions, Educational Art... 467
Industrial Drawing, Training Class for Teachers... 678
Industrial Art Education, The "*Nation's*" Criticism on... 858
" " " and Drawing in Public Schools... 876
Iron and Steel... 384
Kindergarten, Froebel's... 100
Kindergarten and Nursery Department... 895
Labor, Skilled, as an Element of National Prosperity... 200
Last Leaf... 711
Libraries, The Latent Usefulness of Public... 528
Learning by Heart... 775
Light and Air in the School Room... 712
Light for the Sick... 108
Light, About a Ray of... 205
Maintenon, Madame de, and the School of St. Cyr... 769, 837

Mathematics, Relative Value to the Male and Female Pupil of 85
Mind and Health 39
Mind's Horizon, The Enlargement of 518
My Lady Sings 517
Nature : A Neglected Study 359
Night Schools 530
Noms de Plume 884
Notes, Editorial 447
Numerals, Origin of 587, 661
Noxious Vapors, The Effects of 387
Our Boys 508
Old Brooklyn—A Glance of Schools and Teachers 187
Parental Responsibility 443
Parochial School, Scheme of 104
Peking, The Peculiarities of 39
Physical Exercise 595
Physiological Reasons Why 61, 149, 253
Physiology and Hygiene, Study of 458
Political Journalist, Views of a 433
Primary Instruction, The Philosophy and Method of 28, 71, 174, 273, 411, 505, 852
Public Schools, The Course of Study in 866
Public School Teachers, The Physique of 4
Popular Education, Special Training as an Element of 719
Refinement 88
Recreation, Abuse of 171
Reasons Why 445
Recognizing Faithful Service 104
Rumination, Mechanism of 386
Reading, Science of 849
School Accommodation 525
School, After 168
School-Houses, The Construction of 588
School Board and Society Transactions 53, 129, 238, 334, 401, 473, 556, 627, 689, 750, 819, 901
School, Dwight's High 279
Schools, The Episcopalians and the 300
School-Room 139, 204, 304, 376, 532, 621, 685, 745, 815, 888
Schools of Brooklyn, Earlier, Private 279
School Supervision 667
Science Miscellany 214
Science, Six Follies of 110
Scientific Miscellany 40, 107, 213, 314, 387, 459, 544, 601, 730, 797, 664, 868
Scientific Knowledge, The Encumbrance upon 524
Scientific Instruction, Course of 598
Slang, Demoralization of 298
Sonnets 842
Spelling, The Practice of Teaching 701
Spelling 854
Spelling in Schools and Spelling Matches 77
Spelling, The Fallacy of Teaching 582
Spelling, The Philosophy of Teaching 647
Steam, The Song of 107
Study Relations 296
Summer Vacation 270
Sun and the Weather 111
Similitudes 711
Teacher's Association, State 375
Teachers, Qualification of 202
Teachers' Salaries 865
Teachers' Meeting 302
Teaching, The Science, Art and End of 565, 639
Technical Education 18
Throne and Cottage 167
Training School, Hoe & Co 121
Typhoid Fever, Spread of 110
Teacher's Responsibility 562

The People Sovereign 715
Vaccination in Schools 665
Variety 56, 141, 248, 340, 408, 561, 634, 696, 758, 831, 907
Ventilation 313
Venus, Transit of 40
Ventilation of Schools 108
Ventilation, Theory of 537
Verb, The Passive Form of 94
Vivisection 40
Vision of 1900 361
Watt's Poem, A Latin Version of 768
West Point Education, Some Defects of 180
What Shall We Do With Them ? 207
Whitlock, E. J., President Brooklyn Board of Education (with portrait) 834
Woman, Scriptural Ideal of 284
Wood, William, President of the New York Board of Education (with portrait) 778
Years' Decay 661

INDUSTRIAL DRAWING
IN PUBLIC SCHOOLS.

THE COURSE OF INSTRUCTION

PREPARED BY

PROF. WALTER SMITH,

GENERAL SUPERVISOR OF DRAWING IN THE PUBLIC SCHOOLS OF BOSTON, AND STATE DIRECTORY OF ART EDUCATION FOR MASSACHUSETTS,

And adopted for use in the leading Cities of the country.

CITIES WHERE PROF. SMITH'S COURSE OF INDUSTRIAL DRAWING HAS BEEN INTRODUCED.

The following leading cities of the country have made the study of Industrial Drawing a regular feature of study in their public schools, and have adopted Prof. Walter Smith's course of instruction for exclusive use :—

Boston.	Springfield.	Chicago.
Providence, R. I.	Concord, N. H.	Detroit, Mich.
Lowell.	Augusta, Me.	Milwaukee.
Lawrence.	Lewiston, Me.	Minneapolis, Minn.
Newton.	Natick.	Indianapolis, Ind.
Taunton.	Gloucester.	St. Louis, Mo.
Somerville.	Pittsfield.	San Francisco, Cal.
Worcester.	Haverhill.	Washington, D. C.
Cambridge.	Syracuse.	Newport, R. I.
Waltham.	Rochester.	Auburn, N. Y.
Dedham.	Pittsburg, Penn.	Sandusky, Ohio.
Fall River.	Alleghany, Penn.	Lewiston, Me.
New Bedford.	Columbus, Ohio.	
Fitchburg.	Toledo.	

The course has also been placed on the list of text-books adopted for use in the public schools in New York city, Brooklyn, and Philadelphia.

This course has been adopted among more than *five millions* of people.

PARTIES WHO COMMEND PROF. SMITH'S COURSE OF INSTRUCTION.

This course of Instruction is warmly commended by the following well-known educators, each of whom is acquainted with the practical working of the course in public schools :

HON. ANDREW D. WHITE, *President of Cornell University.*
JOHN D. PHILBRICK, LL. D., *Late Supt. of Public Schools, Boston.*
CHARLES C. PERKINS, *Chairman of the Committee on Drawing, Boston Public Schools.*
WILLIAM T. HARRIS, *Supt. of Public Schools, St. Louis, Mo.*
J. L. PICKARD, *Supt. of Public Schools, Chicago, Ill.*
M. B. ANDERSON, LL. D., *President of Rochester University.*
WARREN JOHNSON, *Supt. of Public Instruction, Maine.*
JAMES MCALLISTER, *Supt. of Public Schools, Milwaukee, Wis.*
H. M. WILLARD, *Supt. of Public Schools, Newton, Mass.*
R. W. STEVENSON, *Supt. of Public Schools, Columbus, O.*
G. J. LUCKY, *Supt. of Public Schools, Pittsburgh, Pa.*
EDWARD SMITH, *Supt of Public Schools, Syracuse, N. Y.*
J. O. WILSON, *Supt. of Public Schools, Washington, D. C.*
H. F. HARRINGTON, *Supt. of Public Schools, New Bedford, Mass.*
DUANE DOTY, *Late Supt. of Public Schools, Detroit, Mich.*

For full particulars address

L. PRANG & CO., PUBLISHERS, BOSTON.

NEW AND VALUABLE SCHOOL BOOKS.

We beg to announce the following New Series of important Educationa Works, and to invite Teachers and Educationists to examine them.

I.

ROBINSON'S SHORTER COURSE IN MATHEMATICS.

Edited by D. W. FISH, M. A.

In this course, the Science of Arithmetic, both Oral (*Mental*) and Written, in all its various grades and applications to business purposes, is thoroughly and practically treated in **two** comprehensive and well-graded books. The series is substantially *bound in cloth*, and the two Arithmetics are profusely illustrated with appropriate and beautiful designs. We claim to offer in this series the *cheapest*, *the best*, and the *handsomest* **Shorter-Course** in Mathematics now before the public.

FIRST BOOK IN ARITHMETIC, 168 pages. Price, 50 cents.
COMPLETE ARITHMETIC, 308 pages. Price, $1.40.
COMPLETE ALGEBRA, 462 pages. Price, $2.00.
ARITHMETICAL PROBLEMS, 284 pages. Price, $1.00.
ALGEBRAIC PROBLEMS, 192 pages. Price, $1.25.

The *COMPLETE ARITHMETIC* is also published in *Two Volumes, Part I. and Part II.* Price, 80 cents each.

***We will send sample copies of* THE FIRST BOOK, *and of* THE COMPLETE ARITHMETIC, *for examination, with a view to their introduction, on receipt of* $1.00 *for the two books;* PART I. *and* PART II. *for* 50 *cents each;* THE ALGEBRA *for* $1.50; *and* THE PROBLEMS *for* $1.00 *each.*

II.

SWINTON'S GEOGRAPHICAL COURSE.

By WILLIAM SWINTON.

Author of Word-Book Series; Outlines of History; Language Lessons, Etc.

In the preparation of these works the author has not been content with making merely a skillful compilation; he has, in fact, remodeled the subject of Geography in accordance with the most advanced methods now pursued in our leading cities, and has introduced features of such novelty and importance that the publication of these books must mark A NEW ERA IN GEOGRAPHICAL TEACHING.

The Course is embodied in two books, namely:

ELEMENTARY COURSE IN GEOGRAPHY; designed as a Class-book for Primary and Intermediate Grades, and as a complete Shorter Course. 132 pages, 8vo. $1.20.

COMPLETE COURSE IN GEOGRAPHY, Physical, Industrial, and a Special Geography for each State in the Union. Designed as a Class-book for Intermediate and Grammar grades. 136 pages, 4to. $2.00.

III.

WHITE'S PROGRESSIVE ART STUDIES.

By GEORGE G. WHITE.

Mr. White has solved the problem of a rational system of Drawing adapted to our common educational wants, whereby more real progress may be attained in *One year* than has heretofore been possible in *Five years*, and at far less cost. The system is issued in the form of Cards—the only proper way of presenting the copies to the eye of the student—neatly encased in envelopes containing 12 each, with an accompanying Manual of Instructions, and duplicate sheets of blank drawing paper.

The whole course when completed will comprise a thoroughly Comprehensive and Scientifically Graded System of Drawing in the various branches of Art, including *Industrial*, *Ornamental*, *Landscape*, *Animal* and *Figure Drawing*, etc.

Now Ready:

THE ELEMENTARY SERIES. This series is comprised of 48 Cards, neatly enclosed in envelopes of 12 each, with duplicate sheets of Drawing Paper, and an accompanying Manual of Instructions for each set. The sets are designated as follows:

A *Lines and their Combinations*.....Price, 60 cents.
B *Cubic Diagrams*.....Price, 60 cents.
C *Light and Shade*.....Price, 60 cents.
D *Practical Studies*.....Price, 60 cents.

***We shall be pleased to send sample sets of the Elementary Series for examination, with a view to introduction, on receipt of* $1.25.

IVISON, BLAKEMAN, TAYLOR & CO., Publishers,

138 and 140 Grand Street, New York.